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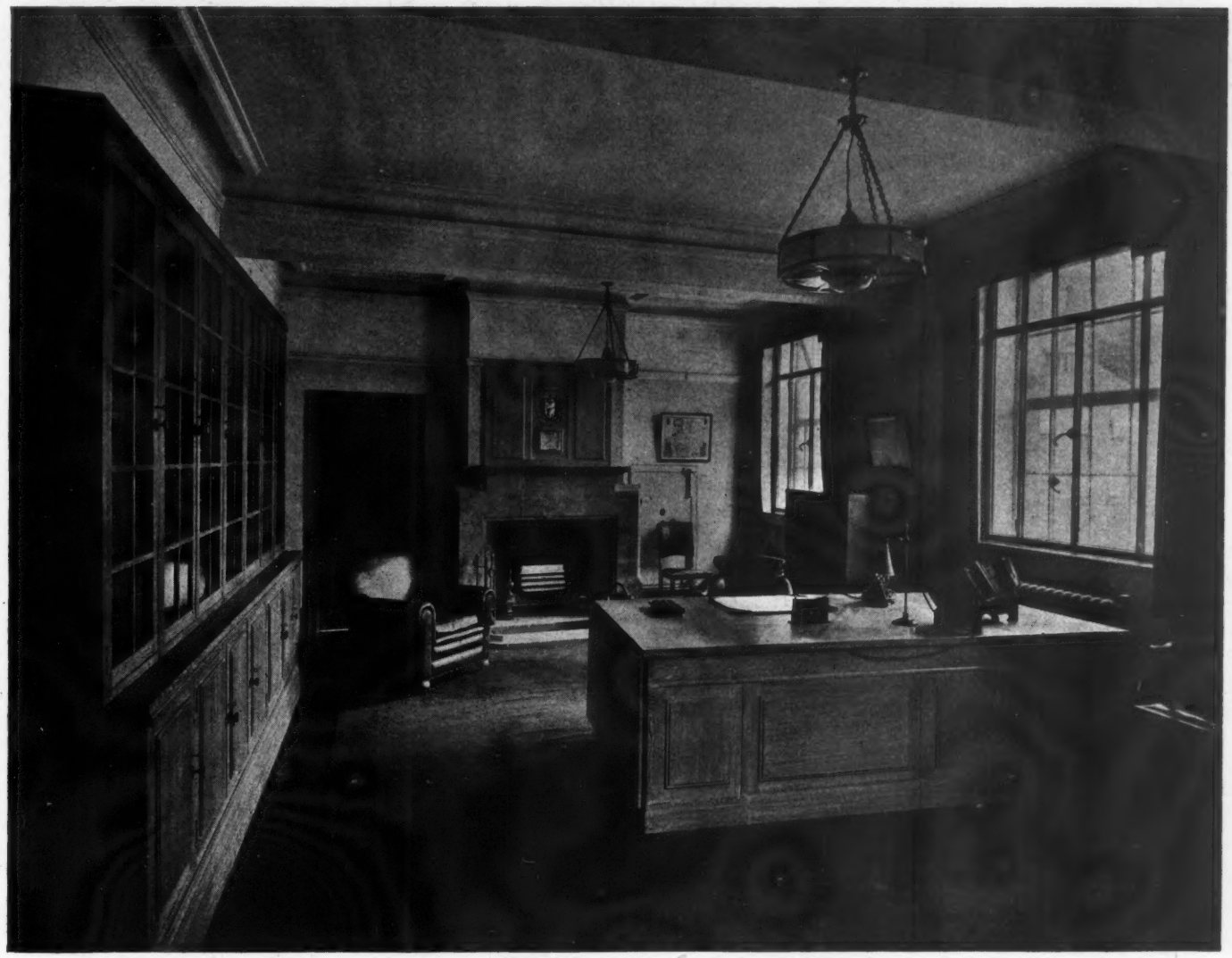


New County Offices, Warwick: Clerk of Council's Room.

MR. A. C. BUNCH, F.R.I.B.A., County Architect.

MEETINGS

FRIDAY, *October* 21.

Royal Sanitary Institute. Mr. E. H. Ford on "Current Sanitary Engineering Schemes in Coventry." At the Council House. 7.30 p.m.

London Society. Professor Beresford Pite on "London's Debt to Wren." 5 p.m.

Institution of Civil Engineers. Mr. T. A. Burnside on "History of Bridge Engineering." At the Institution of Engineers and Shipbuilders in Scotland, Glasgow. 7.30 p.m.

Institution of Mechanical Engineers. Annual Dinner.

FRIDAY AND SATURDAY, *October* 21 *and* 22.

Council for the Preservation of Rural England. Fifth National Conference.—Friday, Blackfriars Hall, Norwich. 8 p.m.

SATURDAY, *October* 22.

Institution of Municipal and County Engineers (Scottish District). Meeting at Stirling.

St. Paul's Ecclesiological Society. Visit to Chapel Royal, Hampton Court. 2.30 p.m.

MONDAY, *October* 24.

Institution of Electrical Engineers. Discussion on "Future Prospect for Electrical Engineers." 7 p.m.

WEDNESDAY, *October* 26.

Institution of Welding Engineers. Mr. J. Dorritt on "Atomic Hydrogen Welding." At the College of Technology, Manchester. 7.30 p.m.

L.C.C. Central School of Arts and Crafts. Sir Banister Fletcher on "Egyptian Architecture: Temples, Obelisks, and Dwellings." 6 p.m.

Liverpool Architectural Society. Presidential Address by Mr. Leonard Barnish. 6 p.m.

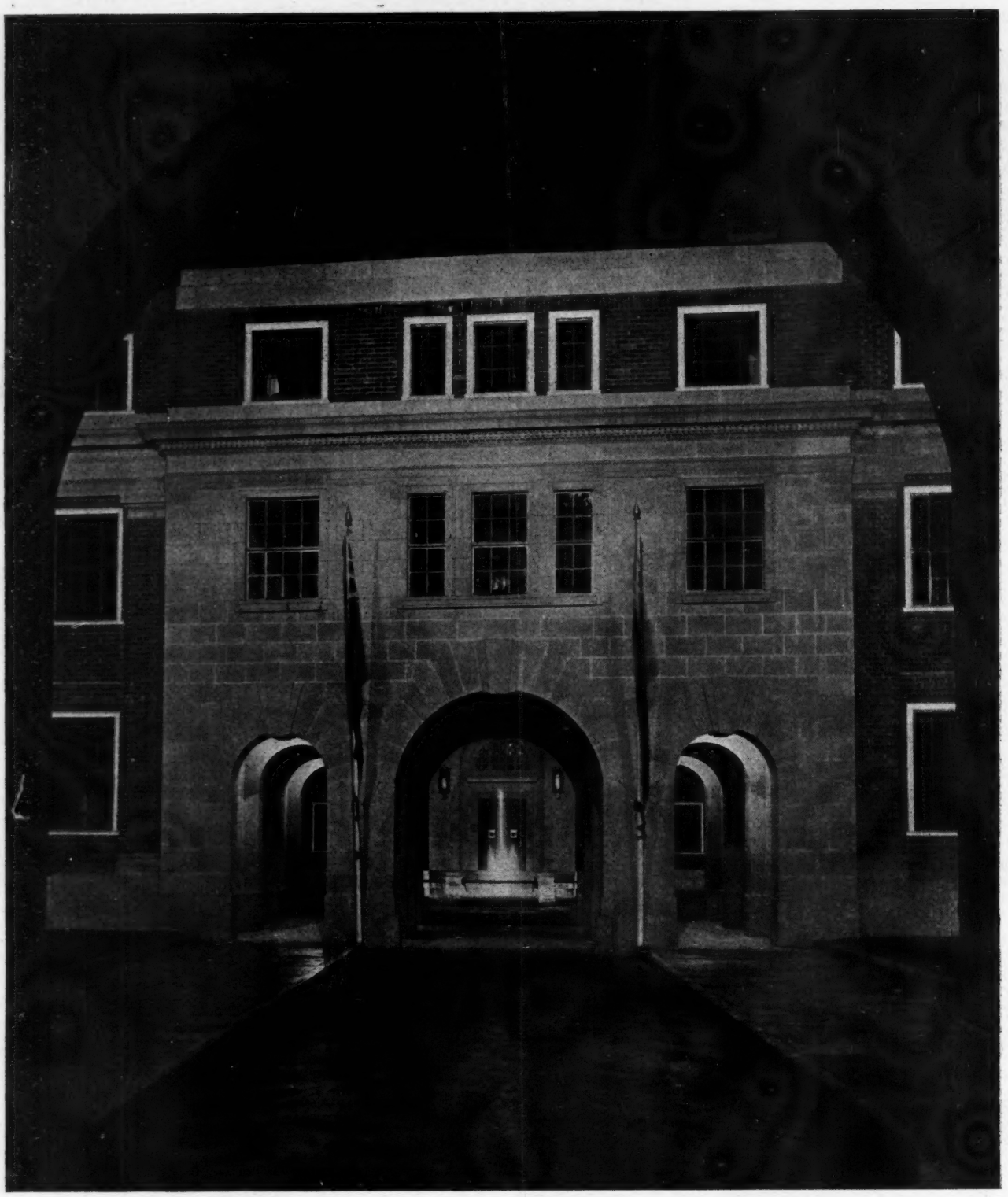
THURSDAY, *October* 27.

Institution of Structural Engineers. Presidential Address by Major E. C. P. Monson and Professor C. E. Inglis on "Dynamic Effects in Railway Bridges." At 10, Upper Belgrave-street, S.W.1. 6.30 p.m.

Society of Antiquaries. Professor V. Gordon Childe on "The Small Forts of North Britain in the Light of Recent Excavations." 8.30 p.m.

Goldsmiths' Company's Lectures. Mr. J. E. Barton on "Modern Forms in Art, with some Suggestions as to their Influence on Silver Design." 7 p.m.

Worshipful Company of Carpenters. Mr. R. Fitzmaurice on "Prevention of Damp in Buildings." 7.30 p.m.



New County Offices, Warwick: Archways leading from Outer to Inner Quadrangle.

MR. A. C. BUNCH, F.R.I.B.A., County Architect.

PROPAGANDA AND PUBLICITY FOR ARCHITECTS

THE problem of unemployment has once more brought the question of publicity, propaganda and advertising into prominence among architects and the various professional bodies concerned with architecture: there is a general feeling that some concerted action is required to advertise the many services which architects can render to the community, but no consensus of opinion as to the way to do it.

It is generally admitted that this lack of knowledge on the part of the public is one of the causes of present difficulty, and many provincial architects think that some collective action in the form of propaganda and publicity is particularly desirable at the present time. As individual members of the R.I.B.A. and its Allied Societies are debarred by the code of professional conduct from advertising or from any of the more recent forms of individual publicity, this seems a reasonable view. A correspondent writing to us on the subject says:

"Although this rule against advertising seems a hard one at times, it is really based on sound common-sense, because it is, to say the least, very doubtful whether the architect could ever successfully compete with the speculative builder in personal advertisement: the inevitable result would be a lowering of professional status, and unwelcome competition in the form of either open or covert reductions in fees. But hardship undoubtedly exists, and because publicity is chiefly given to the work of those architects who least require it; in architecture, as in other things, nothing succeeds like success, so that those who have achieved it get more publicity than they desire, while the younger or lesser-known man is ignored; in fact, even when he designs a building of some importance, his name is often omitted in any references made to it in the daily Press."

For this state of affairs the architect and the architectural societies in this country are partly to blame: it is difficult for a modern newspaper to deal with any "news item"—to be printed in a few hours' time—unless it is supplied in a conveniently concise form, and available, moreover, before the event to which it relates takes place. But this lack of interest in the architect and his work is only a symptom of the general lack of public interest in architecture, which is due to defects in the present-day system of education—or, more accurately, in the system of education which prevailed in the late nineteenth century. Before that time (and the change due to the industrial revolution) things were quite otherwise: there was no lack of appreciation of architecture in the days of the Brothers Adam, the Woods of Bath, and a host of lesser men, and no person of any quality would have considered his education to be complete without a knowledge of the arts, sufficient to appreciate merit, to condemn bad work and to discourse on architecture with some knowledge of the subject.

Thus the problem of modern indifference is complicated, because it has its roots in a lack of knowledge, which it is difficult to impart after school days have finished (when it is difficult for each one of us to keep abreast of the times in his own particular profession or business), and for this reason it appears probable that publicity would only be useful and successful if it followed after education and propaganda. It is no use providing the people with architectural publicity if they are not sufficiently interested to read it, and although there *is* a growing public interest it burns with a fitful and uncertain flame, which requires a good deal of fanning to produce more than an occasional blaze. The cure would appear to be twofold: firstly, and with an eye to the future, to return to the ideas of the eighteenth century, that the education of a gentleman was not complete without a general knowledge of all the arts and especially of architecture; and, secondly, by a carefully considered and progressive scheme of propaganda, which should be undertaken by some really representative body (such as the R.I.B.A.), not to advertise any particular architect or group of architects, or a school or any style or mannerism in architectural design, but continuously and persistently to remind the public of the advantages to themselves in consulting architects on the many questions with which they are well qualified to deal, but some of which might not (to the uninitiated) lie within their province, as well as the more obvious cases of the way in which money can be saved and greater efficiency obtained by employing men skilled in the arts of planning and composition in the case of office buildings, factories, shops, houses, gardens, town planning, and various other things.

The present time offers a good opportunity, as the public imagination has been slightly stirred by the Tercentenary of the birth of one of England's greatest architects—Sir Christopher Wren. Here we see an illustration of the point we have made as to the value of education: there is probably no educated Englishman who has not learned something about Wren, and his schemes for St. Paul's and the replanning of London after the Great Fire. Consequently the public is interested and will, quite willingly, read about his life and work. Would it be possible to develop this idea so that public interest is stimulated in the work of modern architects by inaugurating a series of biographical sketches of well-known architects and their works, linking up the time of Wren with the present day? It could be shown that their works were of value, not only to their own particular clients, but to the much wider circle of the inhabitants of our countryside, of our towns, and of our cities. The idea—which would be novel to many—that the architect is an asset to the whole community, because he is able to add something of value to the common stock of beauty and seemliness, could be skilfully put forward, and the fact that many of the conveniences and amenities of modern life owe their existence to the architect could be usefully commented upon in each of these biographical notes.

These studies, showing that the character of the architect, as reflected in his work, unconsciously affected a large section of the population in various towns and cities and in our countryside, could be followed with a description of the part played by architects in the national housing scheme and concluded by some impressions of the way in which the modern architect is trained, and of the many and complex problems with which he has to deal. To be effective, this scheme should extend over a sufficiently long period. It should be undertaken by the R.I.B.A. and its Allied Societies in the interests of their members, of the cause of architecture, and, finally, to promote that popular appreciation of the art without which it must, perforce, wither and decay.

NOTES

Economy and Unemployment.

Now that Parliament has reassembled, there will no doubt be more consideration given to national economy and its effect on employment, especially in the building industry. Various political economists have expressed their views during the past week, while the Prime Minister had something to say on the question in his luncheon speech on Monday, but we are bound to admit that much of this opinion is of a conflicting character and will be of little help to the ordinary citizen who is looking for guidance and leadership in these very difficult times. We have heard the experts, the politicians and the theorists, but we might with advantage give a little more heed to the opinions of the professional and business classes and those with practical experience in industry—the opinions, for instance, of Mr. J. Lancashire, F.R.I.B.A., the President of the Sheffield and South Yorkshire Society of Architects and Surveyors, whose inaugural address we publish on p. 691. "The issues," he said, "were certainly financial if not economic. The danger to prosperity now was the movement in the direction of national economy. Everybody was in favour of the elimination of waste; we must discriminate between waste, and curtailment. In any private business it was most desirable to cut cut redundant services and eliminate unnecessary payments. But, in the same private business, it would be the sheerest folly to wipe out plans for expansion and development. In good times or in bad, in prosperity or adversity, it was always desirable to wipe out waste; it was seldom or never good to cut out the means to expansion. The economy campaign did not make that discrimination. Its campaigners plunged forward with an unreasoning fear. They were obsessed with a panic dread of expenditure and did not stop to consider the difference between sound spending and destructive waste; their 'economy' was in terms of anything but true economy, of wise spending. Architects and surveyors now felt the first fruits of that disastrous policy. It might well be that truer economy was needed, as it was in architecture itself, but such economy must be planned so that expenditure was remunerative and not wasteful, for there was no worse form of economy than that which forwent the employment of money in schemes of reconstruction, only to have to pay the workmen 16 per cent. of the cost for doing nothing other than kick their heels in dissatisfaction and distress."

Economic Outlay.

The refusal of the Ministry of Health to sanction a loan of £17,792 for building 48 houses for the Oxford City Corporation is hard to understand. Only a few months ago a loan of £20,700 was sanctioned for the same houses. If this change of action is likely to be followed in other cases the outlook is ominous. A writer in the *Manchester Guardian* says that the refusal to allow a city council, one singularly free from suspicion of Socialism, to take advantage of the present easy money rates in order to make much-needed provision for more decent habitations for its poorer citizens, and at the same time relieve local distress from unemployment, is the very reverse of true economy. And we are supposed to have over a thousand millions of unemployed money in the banks!

A Question of Outlay.

"When the Ministry of Health refuse to sanction a loan of £20,000 for the purpose of building cottages for the poorer classes, what is the ultimate cost of the burden and on whom does it fall?" writes a correspondent. "Is the object of the refusal to save the ratepayers' money? Would the cost of such a sum be an appreciable burden? To appreciate the full cost and incidence would, of course, be the duty of the Ministry, and it would be interesting to see how it is worked out—the amount spent in wages out of an expenditure of £20,000, the amount in materials, and the profit obtained by the contractors, have to be considered in the problem of an economical expenditure. Do the Ministry of Health consider it against the general public good to sanction the expenditure? On one single expenditure of such an amount the burden would, of course, be slight, but could a large number of such amounts be sanctioned? If they were, would the money so circulating add to the general confidence and help to loosen the purse strings?"

A Building Memorandum.

The newly-formed Building Industries National Council considered in committee this week the draft of a second Memorandum which is to be circulated at a later date to the Press and to bodies and individuals concerned. Certain statements anticipating the Memorandum have appeared in the Press, but we understand on good authority that such statements have no foundation and do not, in fact, bear relation to the recommendations to be contained in the Memorandum. This, we learn, suggests practical means for instituting a policy of national building. The publication of the Memorandum will be awaited with considerable interest.

Foresight.

Just whilst we are all memorialising the proud supremacy of Saint Paul's Cathedral and of Sir Christopher Wren, we are forced into the contemplation of the lofty Telephone Exchange which the needs of the Telephone Service have thrust up as a barrier to the south view of St. Paul's. We cannot agree that it should have been at all necessary to do this in a well-planned city any

The Canadian National War Memorial, to be erected at Ottawa. (Now on exhibition in Hyde Park).

The Late Vernon March, Sculptor.

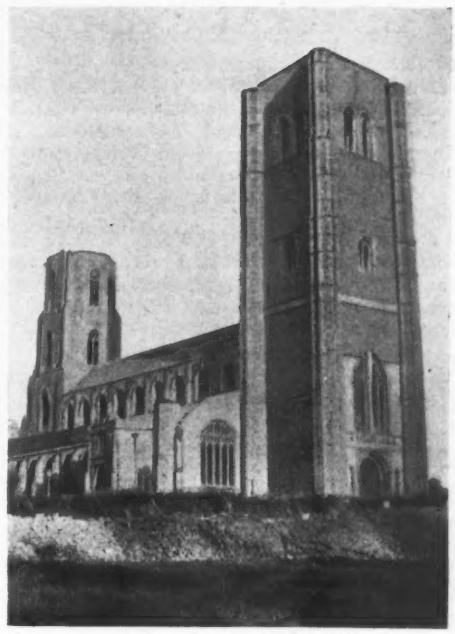
more than we think it advisable to erect structures like some of those on the banks of our beautiful river. We wonder if it ever occurred to those who govern London that a reasonable degree of foresight would prevent tasteless speculators, for instance, from gaining vast sums of unearned increment out of the growing needs of the city. What for instance, is the unearned increment in the surrounding neighbourhood which is created by the building of the great Masonic building in Great Queen Street? Great public developments of building should be planned to benefit the city itself.

Old Maps and Plans at the Surveyors' Institution. Much of considerable interest is to be seen at the fine exhibition of maps at present on view at the Surveyors' Institution. Comparison with the old maps shows what has been accomplished in our day. The state of things in these maps of the 16th and 17th centuries seems almost unbelievably far away, and we may judge from these many maps of old London what chances we have had and how many we have missed. In this regard there is much food for thought in the old plans of London, beginning with No. 1 Horwood's plan of the Cities of London and Westminster, 1799, and No. 2 John Rocque's survey of London in 16 sheets, 1751. Amongst the treasures of the Exhibition we might name a volume of Moses Pitt's English Atlas, 1680-82, John Speed's "Theatre of the Empire of Great Britain," and the first two volumes of Kip's "Theatre de la Grande Bretagne," an annotated description of the most notable royal and other residences in Great Britain, 1735. In one of the exhibits, No. 161, an original Survey of Audley End, the seat of the Earls of Suffolk, we may see how widely the net has been cast for this collection. In some cases there are fascinating little records of the houses which existed on the estates. A well-compiled catalogue adds much to the value of the exhibition, which remains open to the 5th of November.

The Surveyors' Institution Secretary. On the resignation of Mr. Alexander Goddard, C.B.E., from the office of Secretary to the Institution which he has held for upwards of twenty-seven years, the Council have appointed Major A. H. Killick, D.S.O., M.C., to succeed him. Major Killick was educated at Dulwich College and Exeter College, Oxford, taking his degree in 1914. Obtaining a commission in the South Lancashire Regiment, he served during the war in France, Belgium, Salonika, Egypt and Palestine. For his services he was awarded the D.S.O. and M.C. and was twice mentioned in dispatches. Since the war he had been principally engaged in staff duties at home, and in Eastern Europe, Russia and Asia Minor; in reorganising the Officers' Training Corps of Birmingham and Bristol Universities; in passing through the Staff College, Camberley; and in further staff duties at the War Office, particularly in connection with the supervision, training and nomination of officers for staff appointments. At the time of his appointment to the Secretaryship of the Institution, Major Killick held the position of Brigade Major, 2nd Infantry Brigade, Aldershot. He will take office as from November 1 next.

Encourage Living Artists! We must all agree with Sir William Llewellyn, President of the Royal Academy, who, opening the autumn exhibition of pictures at Brighton last Saturday, appealed to the nation and municipalities, to encourage living artists. There should be a better understanding between the architect and other artists, who should endeavour to cooperate in the decoration of public buildings. Too much is left to firms in carrying out such work. Sir Owen Williams recently wrote to the Press suggesting that new public buildings should indicate the products for which a town is noted. Whatever we may think of this suggestion, there are great opportunities here for interior decorative friezes, representing the industries of Sheffield, for instance, with its great blast furnaces and steel rolling. As to the encouragement of artists, we suggest the Royal Academy might give a little more consideration and space to the architects' exhibits at the Royal Academy, for it is from the architects that commissions for decorative work generally come, and the buildings in which the work of the decorative artist is incorporated should be adequately shown at the Academy exhibitions.

Town Planning Education at Liverpool University. The Department of Civic Design in the Liverpool University School of Architecture, founded by the late Lord Leverhulme, was the first to grant a Certificate and Diploma in Town Planning in this country. The qualifications have been recognised by the Town Planning Institute—the professional body corresponding to B.M.A. in medicine—and exemption from their final examination is granted to holders of the Diploma in the Liverpool Department. Only one other school, that at University College, London, holds this same privilege. This recognition is a step forward in the education of architects, engineers and surveyors in the intricate and essential subject of town and country planning, and should go far to encourage students to qualify themselves for the increased demand for their services which the new Act, which comes into force next April, will create. An original feature of the course in Civic Design which was planned by Professor Reilly and Professor Adshead (the first occupant of the Chair) is the inclusion on the staff of special lecturers—men in practice as surveyors engineers, barristers and landscape designers—who are thus brought into direct contact with the students. For over twenty years this system of a whole-time staff, supplemented by special lecturers, has been working successfully. As in the architectural courses, the student in the Department of Civic Design is taught to *design*, not merely to plan or prepare legal documents to conform to Acts of Parliament. The prospectus, giving full details of the courses, fees, etc., may be had on application to the Registrar, Liverpool University.



Perpendicular Church, Wymondham, Norfolk.

(*See page* 674.)

Scottish Students' Successes. The *Quarterly* of the Royal Incorporation of Architects in Scotland, always interesting, contains in its present issue a chart prepared by Mr. James A. Arnott, F.S.A. (Scot.) F.R.I.B.A., which shows the successes in the various competitions for the prizes and studentships offered by the Royal Institute of British Architects. The Schools of Architecture (or their forerunners) concerned are the Edinburgh College of Art; the Glasgow School of Architecture; the Aberdeen School of Architecture; and the Dundee School of Art. The number of successes gained by students from the four schools in the years since the competitions opened, is the remarkable one of 77, in addition to which 46 minor awards have been gained. Since 1920, 16 successes are chronicled, the Essay Prize (oldest of the R.I.B.A. awards), the Soane, the Pugin, the Ashpitel (twice), the Tite, the Godwin Bursary, the Victory (twice), the Dawnay (twice) and the Rome being amongst them. "Scotland has," Mr. Arnot remarks, "an architectural background and a great tradition which may justly be taken as proving the basis of the excellent training facilities possessed by our Scottish Schools of Architecture, both past and present systems." A similar Chart for England and Wales would be of considerable interest and would be complementary to the Chart showing the successes of the Scottish students.

GENERAL NEWS

Professional Announcements.

Mr. Gerald J. Bolland, L.R.I.B.A., late Assistant Architect to the South-West African Government, has taken up residence in England and would be pleased to receive professional correspondence and trade catalogues at East Lodge, Victoria-road, St. Leonards-on-Sea.

Mr. A. Edwin Cherry, P.A.S.I., M.R.San.I., chartered quantity surveyor, has commenced in private practice at 18, Lloyds Bank-chambers, Vicar-lane, Leeds, and will be pleased to receive trade catalogues.

Proposed Housing Scheme, Droitwich.

The Droitwich R.D.C. are to appoint an architect for erection of houses in the rural districts.

Royal Academy Schools Exhibition.

An exhibition of paintings, drawings, and sculpture done by the students of the Royal Academy out of school has been arranged in the galleries of the Academy, and will be open free to the public from to-day (Friday) to Saturday, November 5, 10 a.m. to 4 p.m.

The Ulster Parliament Buildings.

H.R.H. the Prince of Wales has graciously consented to open the new Parliament Buildings at Stormont, Belfast, which are now practically completed. The date has provisionally been fixed for November 16-18. The architects are Messrs. Briggs and Thornely.

Ideal Home Exhibition.

Owing to the death of Mr. Douglas G. Tanner, F.R.I.B.A., the *Daily Mail* Exhibition architect, that newspaper has decided to give Mr. Ian Jeffcott, Mr. Tanner's designer and assistant, the opportunity of carrying on with the plans for the 1933 Exhibition at Olympia. Mr. Jeffcott was educated at Latymer School; afterwards at Sandhurst for the Indian Army; and received his architectural training at the Architectural Association.

Memorial to the Rev. P. H. Ditchfield.

In memory of the Rev. P. H. Ditchfield, their late president, Berkshire Archæological Society are to put a reredos in Barkham Church, of which he was rector. It will be remembered that the late Mr. Ditchfield, up to the time of his death, contributed annually to *The Builder* a summary of the proceedings of the summer meeting of the British Archæological Association.

Waterloo Bridge.

Sir Percy Simmons, Chairman of the Improvements Committee, stated at the meeting of the London County Council on Tuesday that no definite reply had yet been received to the Council's proposed deputation to the Prime Minister on the subject of Waterloo Bridge. He added that he understood that the delay was due to the Premier's other official occupations, but that a reply would be received very shortly.

Derbyshire Rural Crafts Exhibition.

Some of the articles made by rural craftsmen which were seen by the Prince of Wales during his tour of Derbyshire were on view at an exhibition of craft work from that county opened in Birmingham recently. A notable section was that devoted to ornamental wrought-iron and furniture. Realising that the trade of the blacksmith and wheelwright has largely fallen away, the rural community council has made special efforts to provide instruction in light metal work and wood carving.

Housing and Town Planning Conference, Scarborough.

An important national housing and town planning conference will be held at Scarborough during the week-end, November 25-28, under the auspices of the National Housing and Town Planning Council. The Conference will be attended by a large number of delegates from local authorities in England and Wales and Scotland, as well as by several prominent housing reformers and town planning experts. The principal subjects for discussion will be the administration of the Town and Country Planning Act, 1932, and the Housing Acts of 1924 and 1930. A number of interesting papers will be submitted to the Conference. Full particulars can be obtained from Mr. John G. Martin, Secretary, National Housing and Town Planning Council, 41, Russell Square, W.C.1.

Maintenance Scholarships in Architecture.

The R.I.B.A. announce that the following Scholarships, each of £100 a year, have been renewed for a further period of one year :—

Mr. Ralph Dickinson (Birmingham School of Architecture).

Mr. M. G. Gilling (Artists' General Benevolent Institution Maintenance Scholarship) (Liverpool School of Architecture, University of Liverpool).

The Ralph Knott Memorial Maintenance Scholarship of £45, tenable at the Architectural Association School of Architecture, has been awarded to Mr. R. L. Townsend.

The R.I.B.A. Fourth and Fifth Year Maintenance Scholarship of £100 a year has been awarded to Mr. A. M. Irvine, of the School of Architecture, Robert Gordon's Colleges, Aberdeen.

The R.I.B.A. ordinary Maintenance Scholarship of £100 a year has been awarded to Mr. E. F. Ward, of Northampton.

Economy with Beauty.

In the course of a public inquiry into the application of the Town Council of Cheltenham for approval of a preliminary statement of proposals for a town-planning scheme, Sir Fabian Ware, chairman of the Gloucestershire branch of the Council for the Preservation of Rural England, was called on to give evidence on behalf of that body. While regretting that successive Governments had refused to give local authorities direct and simple power to control elevations, and thus to prevent wrong building, the root evil which they believed could best be dealt with in that way, they strongly advocated making the most of existing powers. He considered that these Cheltenham proposals were an admirable example of how that could be done, with some legal ingenuity and with useful guidance and persuasion from the Ministry of Health. He was alarmed at first by the many suggestions of new roads, but economy and æsthetics were good partners, and at present there was no fear of any of these roads being constructed until the need for them was proved; but it was of practical urgency that the course of these roads should be planned now, in advance, if chaos, or the destruction of many a beautiful village street, were not to ensue.

A Belfast Slum Clearance Scheme.

As a result of representations from the Irish Regional Council of the National Federation of Building Trades Operatives it is possible that a slum clearance scheme may be embarked on in Belfast at an early date. A deputation from the Federation which met the Estates Committee of the City Corporation urged that such a scheme would provide considerable employment for local building trades operatives, and in demolishing the unsightly slum dwellings in various parts of the city and rehousing the tenants, would supply a very necessary civic want. The deputation also pointed out that Sir Dawson Bates, the Northern Ireland Minister of Home Affairs, had stated that the Government would contribute to the cost of such a scheme. The deputation was informed of the efforts which the committee had made last year, without success, to have the provisions of the English Housing Acts incorporated in the Bill then before the Parliament of Northern Ireland. The Planning and Housing Act (Northern Ireland), 1931, closely followed the provisions of the English Act, but omitted the clauses of this measure providing for Government assistance towards the cost of rehousing operations. The committee, however, was most sympathetically disposed towards the proposal of the Federation, and would consider it at an early date.

THE WREN CELEBRATIONS

"London's Debt to Wren."

The first lecture of the London Society's winter session takes place in the Hall of the Royal Society of Arts, 18, John-street, Adelphi, to-day (Friday), when Professor Beresford Pite will give an address on "London's Debt to Wren." The Very Rev. the Dean of Westminster will preside.

Wren as the King's Surveyor.

A small temporary exhibition has been opened in the Museum of the Public Record Office illustrating Sir Christopher Wren's work as Surveyor-General of the King's Works. An autograph letter by Wren has for long been among the permanent exhibits in the Museum, and a letter to him from the Vice-Chamberlain of the Exchequer about repairs needed to the Chapter House was recently added. The new display consists of a few specimens from the mass of letters by and relating to Wren, which are to be found among the Treasury Papers and Domestic State Papers of his period.

Wren's Work at Lambeth Palace.

Those who wish this week-end to see one of the finest examples of the work of Sir Christopher Wren, who was commemorated at a special service at St. Paul's Cathedral yesterday (October 20), should visit Lambeth Palace, writes a correspondent. A party is often allowed to go round the Palace on Saturday afternoons, and a good deal of time is always spent in the library, designed by Wren and built for Archbishop Juxon. This was once a great dining-hall, and succeeded the building destroyed under the Commonwealth, in which Archbishop Warham entertained both Erasmus and Holbein. Great care is being taken by the present Archbishop of Canterbury to preserve Lambeth Palace, part of which dates from the twelfth century. The chapel above was built in 1247 by Archbishop Boniface of Savoy.

COMPETITION NEWS

Scarborough Hospital and Dispensary Competition.

The assessor in this competition, Mr. Hubert M. Fairweather, F.R.I.B.A., has made his award as follows :—

1, Mr. Wallace Marchment, F.R.I.B.A., 11, Stanley House, Larkhall, London, S.W.8.

2, Messrs. Dawson, Oliver and Associates, 101, Park-avenue, New York City.

3, Messrs. Heaton Comyn and W. Edward Coker, 28, Austin Friars, London, E.C.2.

4, Messrs. Lanchester, Lodge and Davis, 19, Bedford-square, London, W.C.1.

All the designs submitted are on exhibition in the Grand Hall of the Spa, Scarborough, until Tuesday, October 25. The four premiated designs will, by arrangement with the organisers of the competition, be on exhibition at the Building Centre, 158, New Bond-street, W.1, from October 31 to the following Saturday, November 5.

CURRENT COMPETITIONS.

	Particulars published in "Builder."	Sending in date.
Cement Marketing Co. invite designs for houses promoting the artistic use of cement. Cash prizes totalling 210 guineas. Assessors, Messrs. L. De Soissons, Howard Robertson and P. D. Hepworth, FF.R.I.B.A. Conditions from company at Portland House, Tothill-street, S.W.1	Sept. 30	Dec. 3
Town plan for City of Stockholm. 60,000 kr. (approximately £3,000) in prizes, including first prize £1,000 approximately. Assessors include E. G. Asplund, Ragnar Ostberg, and G. L. Pepler. Programme (free), documents (on 40 kr. deposit), from Registrar, Town Planning Office, Stadhuset, Stockholm	May 27	1933 March 1.
Proposed hospital at Dundalk, Ireland, for Louth County. Assessor, Mr. Thos. J. Cullen, F.R.I.A.I, 25, Suffolk-street, Dublin	Sept. 23	—

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The Condition of the Building Trade.

SIR,—In reference to Mr. E. Boulton's letter in your issue of the 14th inst., it may interest your readers to know that this Federation has posted to each Member of Parliament a specially printed copy of the Memorandum of the Building Industries National Council and of our own chart, which you kindly printed in your issue of September 23. These will reach Westminster in time for the opening of Parliament.

We should like to take this opportunity of thanking you for the interest you have taken in this vital matter.

R. COPPOCK,
General Secretary, National Federation of Building Trades Operatives.

R.I.B.A. Membership.

SIR,—In your issue of September 23, Mr. William Davidson discusses "opportunities" wherein architects may easily lapse from a standard of integrity. Among possible instances he includes the following:—"An architect wishes to apply for membership of the Institute. He cannot draw (in the real sense). He submits another's drawings with his application!"

Mr. Davidson will no doubt be surprised when I tell him that such an act carries with it the approval and support of the Institute. No other conclusion is possible from my experience, following upon my own recent application for membership.

I had complied with all the requirements of the standard schedule, when, some time later, I received a letter requesting that, in support of my application, the Institute would be glad if I would kindly submit a letter from my principal to the effect that certain of the drawings accompanying my application were my own work.

I replied that, before I acceded to this request, I should like to know whether it was equally the custom of the Institute to require a "principal," applying for election, to obtain a similar confirmation from his "assistant."

The Institute ignored my question and reiterated their request. I repeated my question and gave my reasons for asking it. The Institute thereupon regretted that I should take objection to their procedure. Such a thing as my question had never happened to them before.

Again I repeated my question. This time I obtained some result. I was informed that it had never been suggested that a practising architect was expected to do, with his own hand, all the drawings which illustrated his design. The question I had asked was therefore irrelevant.

I replied to the Institute as follows: ". . . I am now able to appreciate that a 'principal' architect, applying for election to the R.I.B.A., is entitled to submit designs which are not drawn by his own hand, whereby he may be admitted without first proving himself to be capable of drawing. This information half disposes of my question. Perhaps you will now be kind enough to let me know whether the corroboration of his 'assistant' is required before his sole authorship of the submitted designs is accredited? Or is this also left to supposition? . . ."

Of this letter I received an acknowledgment (dated August 9) from the Secretary, saying that it would be laid before the Committee. Since that date I have received nothing further from the Institute.

That such a state of affairs should be is almost incredible. I have put to the Institute an unmistakably clear and entirely legitimate question, such as any intending member of a reputable society or club is entitled to ask, and to which an answer should have been given equally clearly and by return of post. Further comment is needless.

MALCOLM MACTAGGART.

"Hot Water in Plenty."

SIR,—Your correspondent, Mr. L. E. Walker, seems to want to beg the question which I raised of the apparent defects in the system shown in his drawing and the article on the subject named above, and has either misread, or wishes to misquote, my statements. If he reads aright my letter in your issue of the 7th inst. he will see that my statements are not contradictory. I said, "With a cylinder the cold supply should go into the lowest part, and thence by the primary return to the boiler. *Otherwise*, if there was a large quantity of hot water drawn the cold would pass through the boiler, before it could gather heat, into the primary flow which discharges rather high up in the cylinder, and have the effect of cooling the hot water already there." My letter does not assert "that the cold connection as shown in the illustration," acts as named in the above extract from my previous letter—just the reverse, if it is read correctly.

The second statement, with which Mr. Walker says he agrees, "the cold supply would discharge by the primary return into the cylinder before it had gone to the boiler," is a more serious matter. It would be very different from, not "very much the same," as your correspondent says, as if the supply had gone to the cylinder. When I said that the cold supply should go direct to the boiler, it was assuming that there was no cylinder in the system, as none was shown in the drawing. With a cylinder, to get the best results, the cold supply must go through it, and thence to the boiler. With the connection as shown, connected to the primary return, when a "draw off" tap was opened the lower part of the cylinder would fill with cold water, and flowing by the primary return would stagnate, or stop the flow of hot water from the boiler by the primary flow (water could not pass this way whilst cold water was passing the primary return). Thus, instead of when a tap was opened the water passing from the boiler by the primary flow to take the place of the hot water being drawn from the top of the cylinder, and its place taken in the boiler by cold water passing across the bottom of the cylinder and thence by the primary return to the boiler, cold water would flow up the primary return and flood the lower part of the cylinder. This would have the effect of cooling the hot water in the cylinder, and, especially if a large supply was drawn off, would more or less cool the hot water in the higher part of the cylinder. When this draw-off was closed normal circulation would be restored. This illustrates the objection to the cold supply being installed as shown in the drawing. The cold would be filling the cylinder, instead of the hot from the boiler.

The saving of a trifle of cost of a flanged connection would be balanced by the saving in cost of the connection to the primary return, and some feet of pipe, but, even if there were a slight extra cost, there would be no loss of efficiency, as there would be if the system were carried out as the drawing shows.

Of course, I have no knowledge of the efficiency of the job Mr. Walker says his sketch was fashioned on, before the alteration, and after, so I cannot say if there was a loss of heat and loss of draught of the flue, and therefore I don't admit that he has answered my criticism. But I will say that if opinions were asked of architects, heating engineers, plumbers, and others interested, the vast majority would agree with my remarks. FOREMAN OF WORKS.

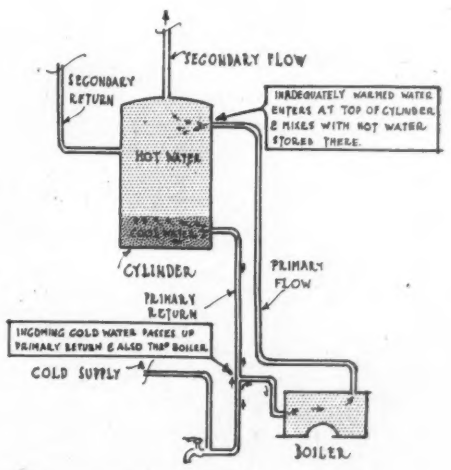
We forwarded a proof of the above letter to Mr. L. E. Walker, who replies as follows:—

SIR,—If the statements made by "Foreman of Works" in his letter of the 7th inst., were misunderstood by me, it was due to his loose use of the word "*otherwise*," which might mean anything. The preceding correspondence appeared, and to me still appears, obviously to suggest that the alternative arrangement of pipes thus referred to was that indicated in my original sketch, in which case the contradiction in his two statements remains.

I do not think it is a good thing for the cold water supply to be connected direct to the boiler of any system—with or without a cylinder—from which water is drawn off in large quantities, and further, I cannot imagine why "Foreman of Works" should assume that any system for the supply of hot tap-water would be without a storage cylinder or tank, because such an arrangement would be hopelessly inefficient. It would overheat if no water were drawn off, and when any considerable amount of hot water was drawn off, the incoming cold water could not acquire sufficient heat during its rapid passage through the boiler.

"Foreman of Works" is not correct in his assumption that when the cold supply is connected to the bottom of a cylinder, *all* the cold water entering the cylinder would pass immediately to the primary return and be sufficiently heated by its passage through the boiler before it replaced the hot water drawn from the top of the cylinder. *Some* of the cold water does take this route, but the rest will remain in the cylinder, and if sufficient hot water is drawn off at a rapid rate it is inevitable that the lower part of the cylinder will be flooded by cooler water.

What "Foreman of Works" has lost sight of is that when hot water is drawn from a cylinder the water that replaces it enters the cylinder from *all* connections that communicate with the cold supply, and the one objection to the cold water connection being as shown in my original sketch (which I again explain did not purport to show an ideal arrangement but only one that might be found in many small houses) is that *some* of the water would pass through the boiler and primary flow and enter the cylinder near the top, and as it would not become very hot in its rapid passage through the boiler it would lower the temperature of the hot water stored in the upper part of the cylinder. This is made more clear by the sketch herewith.


SECONDARY FLOW
SECONDARY RETURN
INADEQUATELY WARMED WATER ENTERS AT TOP OF CYLINDER & MIXES WITH HOT WATER STORED THERE.
HOT WATER
CYLINDER
PRIMARY FLOW
PRIMARY RETURN
INCOMING COLD WATER PASSES UP PRIMARY RETURN & ALSO THRU' BOILER.
COLD SUPPLY
BOILER

SKETCH SHOWING THE POSSIBLE DRAWBACK OF CONNECTING COLD SUPPLY TO PRIMARY RETURN.

I have not at any time suggested that it would not be best for the cold water supply to enter the cylinder direct, but it is quite another matter to prophesy, as "Foreman of Works" has done, the disastrous results that would follow the alternative arrangement which exists and functions without serious defect in many cases.—L. E. WALKER.

[This correspondence must now cease.—ED.]

Other letters are held over until next week.

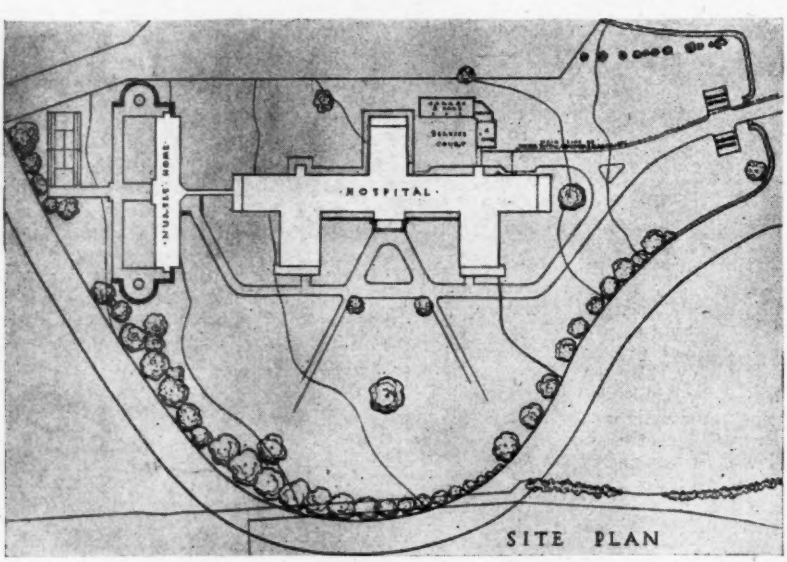
THE SCARBOROUGH HOSPITAL COMPETITION

THE impression which is conveyed by an examination, necessarily somewhat superficial, of the schemes, 128 in number, which have been submitted in this competition is that the general standard of design is distinctly high, and that most of the entrants must have had either some practice in hospital construction or have devoted a good deal of study to the subject. Many provincial architects have opportunities of dealing with this class of work, but the extensions and alterations which fall to their lot may familiarise them with the requirements of the various departments without equipping them for grappling with the problem of an entirely new building. There is evidence of this in many of the designs submitted in this competition. Quite a lot of good planning of individual units is to be seen, but only a limited number of the competitors have grasped the essential feature of their task, which, to judge by the awards, was to produce a close co-ordination of parts without crowding and with the most strict regard for economy. The result has been achieved more fully in the schemes placed first and second than in any others.

The winning design (No. 40), which is submitted by Mr. Wallace Marchment, F.R.I.B.A., of Larkhall, London, amply deserves the place which has been awarded to it, as approximating most closely to what we may assume to be the requirements of the hospital authorities. This is not to say, however, that it is the most attractive example of planning and designing which has been submitted. As will be seen from the drawings, the units are well grouped in relation to one another from the point of view of easy and efficient administration and service, and their details are, for the most part, such as would commend themselves to hospital authorities.

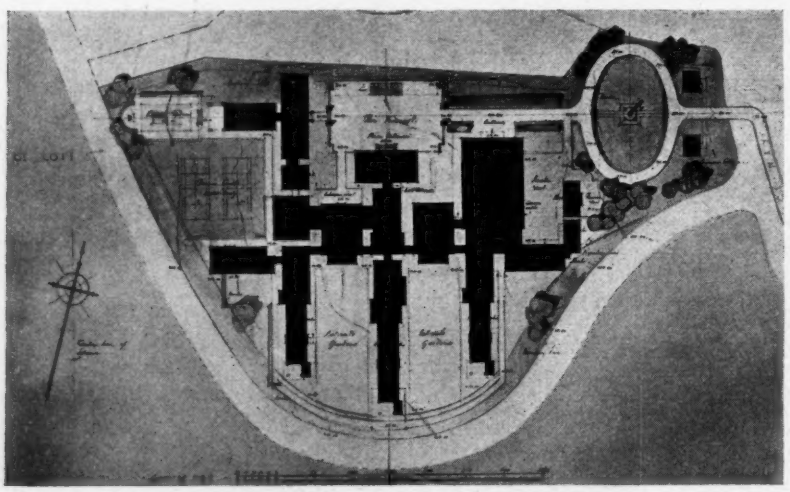
Site Plan, First Premiated Design.

MR. WALLACE MARCHMENT, F.R.I.B.A., Architect.



Site Plan, Second Premiated Design.

BY MESSRS. DAWSON, OLIVER AND ASSOCIATES.



Site Plan, Fourth Premiated Design.

BY MESSRS. LANCHESTER, LODGE AND DAVIS, FF. & A.R.I.B.A.

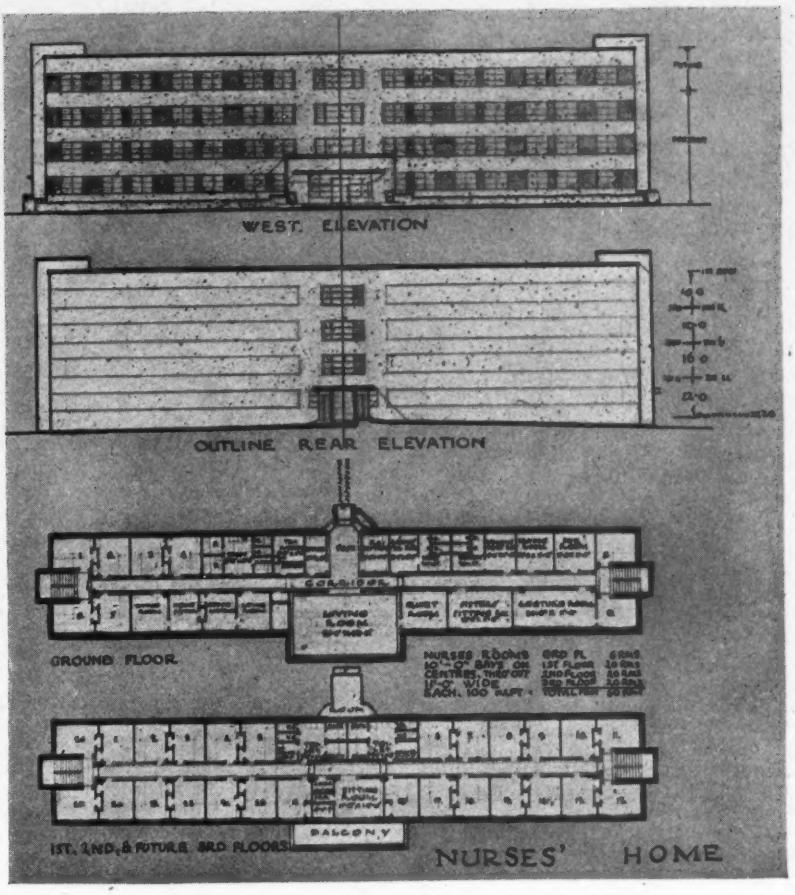
One may, perhaps, without being ungenerous, refer to a few points which may be open to criticism. The corridor in the maternity block suffers from a lack of direct natural light and ventilation. The access to the mortuary from the main block is apparently through a door in the end of the main ground floor corridor, and thence outside the building. The soiled-linen shoot on the east side is not very well placed for delivery to the laundry. If the pipe duct in the basement were a corridor it would be an advantage. The operating room is not so central as in other designs, but would function well enough owing to the arrangement of the wards. The covered way to the nurses' home provided in other schemes would probably be a welcome addition. The tea kitchen in the latter is small and cramped, and there is a lack of box-room accommodation both for nurses and maids. The bed lifts and kitchen service are well arranged in central positions, and the disposition of the extension wings seems admirable. The elevations hardly call for comment either in one way or the other. The cubical contents have been kept remarkably low, viz., 904,520 feet without the extension, and the smallness of the estimated cost, which amounts to £83,147, has no doubt been one of the main factors which influenced the award.

The scheme by Messrs. Dawson, Oliver and Associates, of New York, which is placed second, runs very close on the heels of the winning design, which it somewhat resembles in general lay-out. This is the only plan which was noticed in which the beds in the wards are placed parallel with the window wall, and, however well it may be claimed that this arrangement may work in actual practice, the effect on plan, especially in the case of the large wards, is not attractive. The wards in this case are in three stories as

compared with two in the winning design. The operating room and kitchen service are both well placed, and the soiled-linen shoot delivers in the receiving room of the laundry. The nurses' home is well planned and connected to the main building with a covered way, but its internal corridors are not so well lighted as could be desired. The access to the mortuary for the public and for the removal of bodies is not too convenient. The disposition of male and female patients on the second floor seems a little confused. The cubical contents amount to 1,303,493 ft., and the cost at 1s. 6d. per cubic foot would be £101,222, exclusive of the extensions. The elevations in this case also call for no special comment.

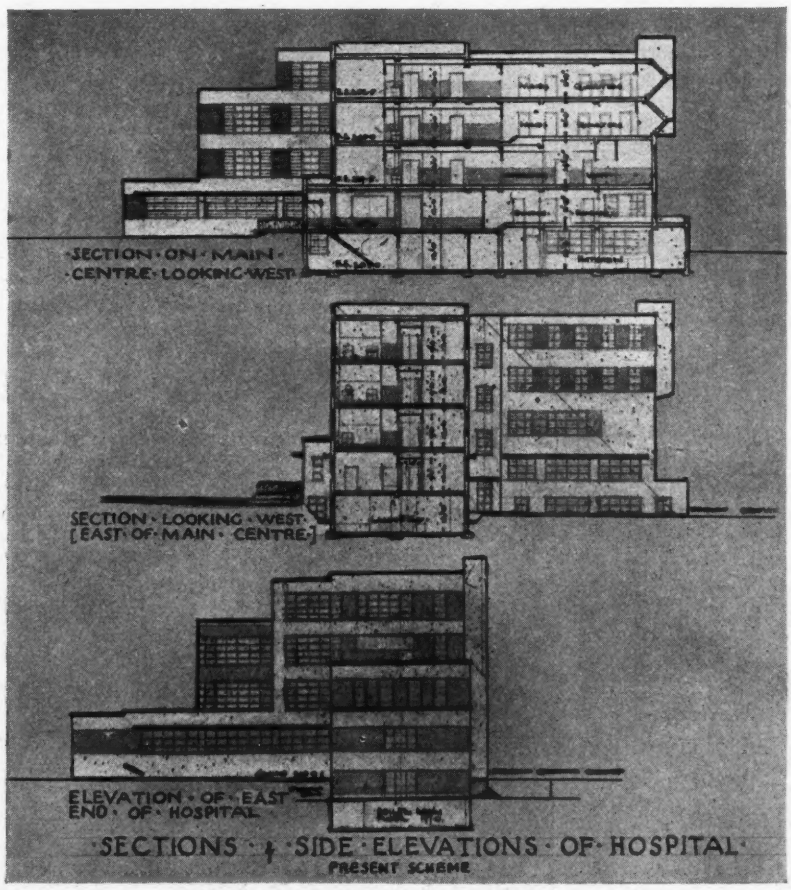
Design No. 59, by Messrs. Heaton, Comyn and W. E. Coker, of London, placed third, is one of the most scholarly and thoughtful schemes submitted, but the various units are not so closely co-ordinated as in the more successful propositions. The length of the corridors is rather formidable, and the operating-room and kitchen are hardly central enough. The disadvantages which would attach to the incorporation of the laundry and mortuary in the main building are probably not counter-balanced by the advantages of detachment. The arrangement of the extensions is not quite happy. The cubical contents, without extension, are 1,958,318 ft., and the estimated cost at 1s. 8d. is £158,987.

Scheme No. 118, by Messrs. Lanchester, Lodge and Davis, which is placed fourth, has many good points, and is full of interesting detail. The composition is not, however, so compact, and this is reflected in the cubical contents, which for the completed scheme amount to 2,171,356 ft., as compared with 1,530,103 in the case of the design placed second. The access to the casualty and out-patients' departments and to the laundry and the disposal of foul linen have been well worked out, and there is great attraction in the arrangement of the sitting-rooms in the nurses' home, which have a south aspect and overlook a garden and tennis lawn. The operating theatre is on the first floor, and the surgical wards on the first and second. The estimated cost, without the extension, based on a rate of 1s. 8d. per cubic foot, is £147,016.



Second Premiated Design.

By Messrs. Dawson, Oliver & Associates.


SECTION ON MAIN CENTRE LOOKING WEST
SECTION LOOKING WEST [EAST OF MAIN CENTRE]
ELEVATION OF EAST END OF HOSPITAL
SECTIONS & SIDE ELEVATIONS OF HOSPITAL
PRESENT SCHEME

Second Premiated Design.

By Messrs. Dawson, Oliver & Associates.

The lay-out most generally favoured by the other competitors has a main service corridor running east and west, with an administration building projecting on the north, and two, three or four pavilions extending towards the south. In most cases the out-patients' and casualty departments are placed on the east, and the nurses' home on the west, with its long axis running north and south. A few examples are to be found of what may be called the radiating type, and which are somewhat reminiscent of the Fifth Avenue Hospital in New York. The best of these is No. 124, by Messrs. Elcock and Sutcliffe, a two-story building in which the units are well arranged. The plan looks well in the upper floors, but the length of the corridors on the main floor may be thought excessive. The position of the children's unit and the projection of the special wards from the sides of the main arms look awkward on the plans.

The design of Mr. James Miller, of Glasgow (No. 110), is on "pavilion" lines, with two floors of wards. The operating block is too much in a corner and the entrances to the main block and out-patients' department are not happily placed.

Messrs. Nicholas and Dixon-Spain submit a scheme (No. 62) which shows careful thought and knowledge and is well arranged, but the units are not so closely connected as in the winning design. It is also on pavilion lines with two floors. The cubical contents amount to 2,198,800 ft. for the complete scheme, which is rather high.

No. 50, by Messrs. Milburn, is also well worked out, and it is noticed that in this case the single-ward patients enjoy the luxury of a separate corridor, parallel with the main service corridor of the building.

Messrs. Gibson and Gordon (No. 4), Mr. A. W. Kenyon (No. 85), Mr. P. D. Hepworth (No. 126), Messrs. Scott, of Norwich (No. 115,) and Mr. P. J. Westwood (No. 112) also submit plans which have much to recommend them, and there are many others which offer points of interest.

THE VILLAGE LAY-OUT

VII.—WYMONDHAM, NORFOLK.

By FRANK BENNETT, A.R.I.B.A.

Tourists motoring from London to Norwich will pass few villages resembling Wymondham (pronounced Wyndham). It is included in this series as the "Y"-shaped village. Little "old-world charm" remains to enchant the jaded traveller, although many picturesque half-timbered houses still hang their upper stories over the narrow side-walks. It is a crowded, busy place where the houses hob-nob, shoulder to shoulder, along the high street like spectators waiting to see a passing procession. It is still pleasant with a gay mixture of houses of all periods, white, red, yellow, broad, narrow, square-cut and gabled. Approached from the London direction a bridge marks the entry to a narrowing street which veers round sharply at the far end, disclosing the livelier part of the village rising up an incline where it is crowned by the famous octagonal market cross standing centrally in a broad triangle formed in the crutch of the forking roads.

Entering by road, the first impression of squeezing through a bottle neck gives place to relief on opening into the broadening triangle, the first impression serving usefully to slacken the pace of traffic. Hostelries, shops and the important buildings stand around the market place, which accommodates the waiting cars; and a line of country dwellings, in a solid block, close in the market at the back.

Beyond, the left-hand road runs on narrowly to broaden out on its way to the far-spreading outskirts of Norwich, while the right-hand fork, after a short run, discloses the village green. The green, strangely disposed as a sort of anti-climax to the market place, serves as a harbour of quiet repose much appreciated by the villagers. During the day the unceasing stream of traffic destroys the languid atmosphere so dear to many a village, but of an evening when the fretted outline of the varied buildings stands sharply against the darkening sky, Wymondham comes into its own.

The greater glory of Wymondham, however, is the magnificent church. Set in a wide ascending meadow, it flaunts its two massive towers like giants striding over the tiny farmlands. The one tower, austerely simple, stands terminating the lofty nave, famous for the rare quality of its hammer-beam roof, while the other, the disused remains of an old abbey, ascends in regular stages of octagon and square through gradual transitions. The elaborate detail of the newer west doorway reflects the fine tracery of the crumbling windows of the old tower.

The district around Wymondham boasts a particulary expansive type of Georgian house. The bricks used as ordinary facings, of a

The Market Cross, Wymondham, Norfolk.

beautiful soft Indian red colour, seem to contain the quality of the finer rubbers used in the south. Large windows, generously divided and flanked with shutters, take up a simple pattern in an ample distribution of solid and void. Doors, slenderly detailed and decked in coats of white, grace the entrances. Black, pantiled roofs sweep down from high ridges to be gripped closely at the eaves by carved wood cornices. Dormers, modestly rounded, project here and there from the roof slopes, and gable ends throw up large, squarely finished chimneys. Symmetry in these houses is the unvaried rule, and where additions are made the newer wings, of decreasing height, carry on the style of the main block with sympathetic precision.

The village cross, a toy example of the finer Elizabethan work of the district, and once, no doubt, used for market transactions, although now the public library, fits admirably into the disposition of the surroundings and proclaims the early traditions of the village. Once a farming centre entirely, the early beginnings of industry brought small factories into Wymondham, which grew into large industries now employing many of the local population.

The planning of the Crown Hotel, typical of numerous other old coaching inns in East Anglia, deserves mention. A way in, cut through the side of the ground floor, leads to an inner court, where the old stables now garage motor cars. Then a way leads out at the back to a minor road. The enormous rooms in the hotel are lit by windows, apparently ample to satisfy travellers in the days when men lived more in the open, but of a size to satisfy no modern building laws.

"THE BUILDER" DEBATE

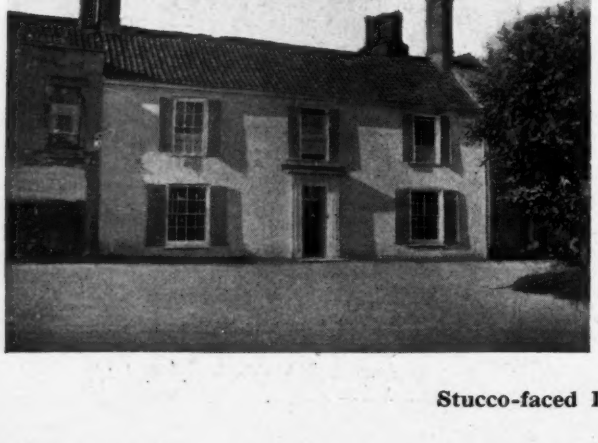
LV.—NORTHERN OR SOUTHERN CONTRACT PRACTICE?

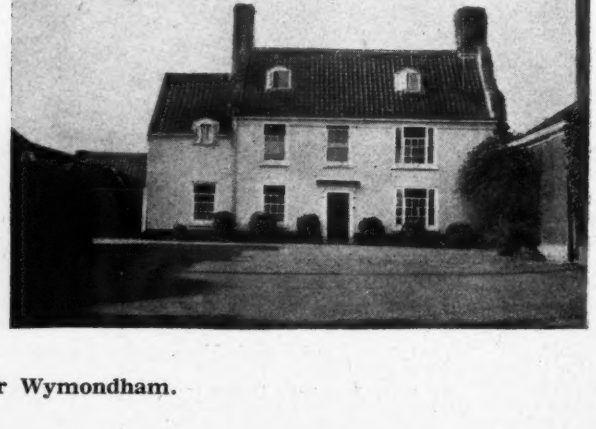
Sir,—"Positive" seems to suffer from some confusion of mind on this subject, but he is correct in assuming that it is more than a matter of custom and that there must be a real preference for one or the other practice.

There is a general vague feeling in the south that a master builder is master of all trades and therefore the pre-eminent controller of the entire building organisation. Experience of the modern master builder suggests to me that he is either one of two types. The first is that of the master builder risen from a tradesman and by success arriving at a shrewd knowledge of the ways of building and of organising his staff. He retains, however, the characteristics of the man who has risen from the ranks of a trade, and remains essentially a tradesman in that trade first, with only an after acquisition of knowledge in the allied trades. He is, in fact, either a bricklayer, a mason, a carpenter first and foremost, and supreme in his knowledge of his life's training, but otherwise has only the intimate knowledge of other trades which subsequent study and experience can give to any intelligent man of suitable type. He is, therefore, no more fitted to carry the responsibilities of building in all its branches than the experienced architect or the experienced clerk of works.

The other type is that of a younger man, probably the son of a successful builder, who has been spared the "mill-race" through which his father passed. He has probably been sent to a public school, and possibly to a university, and has the polish and self-assurance that that type of training promotes. His introduction to building may commence in his early 'twenties and extend within the four walls of the office, and though he may have self-confidence and the society manner of the born financier, he is distinctly shaky in his technicalities, needing the constant attendance of experienced tradesmen to help him through. This type is obviously even less fitted to control building than the experienced architect and clerk of works.

"Positive" has stated that the employer, under the northern practice, bears the responsibility of his clerk of works' mistakes. This is to a certain extent true, although he has the protection of the law in the case of such mistakes arising out of the negligence of his architect. But do we not all run the risk of suffering by our subordinates' mistakes and influences, and avoid disaster by the most careful choice of servant? Let it not be forgotten that the risk of disaster, although measured in pounds instead of thousands, is relatively greater in its bearings upon the life of the clerk of works than upon the average employer. A clerk of works dismissed for inefficiency is finished for life. He may drag on a precarious existence as a





Stucco-faced Houses, near Wymondham.

builder's labourer, or as a craftsman in his old trade; but the chances of restoring himself in this life to a position of responsibility are nil. Is it not patent that the risk of such a man, who has been selected carefully by former reference and experience, letting his employer down is almost negligible?

So we may say we have reduced the two methods to a common level so far as employer's risks are concerned. "Positive" recognises the risks in both cases, but suggests that they are greater to the employer than to the contractor as responsible parties. Many will believe that the contractor is by nature no better fitted to bear this than the employer.

"Positive" also admits that those risks have a value in money. Surely it is better to pay for them in the remote and few instances where they materialise than to pay a purely arbitrary premium to the contractor whether they materialise or not. "Positive" says that the contractor will more or less ignore those risks where competition is keen. I suggest, then, that if the contractor is such a man of wisdom as "Positive" suggests, the employer may equally ignore the risk.

Finally, there is an element which "Positive" ignores. The general contractor is entitled to a builder's profit on all sub-contracts. What does he do for it? Generally absolutely nothing. I suggest that bonus is better remaining in the employer's pocket.

A.R.I.B.A.

SIR,—"Positive" accuses me of being "half-hearted"; had he said "broken-hearted" he might have come nearer to the truth, for his picture of a poor architect driven into bankruptcy for the want of a general contractor on to whom he might shift the burden of his (the architect's) mistakes is indeed heart-rending. On the other hand, the alternative picture of the joyous builder bringing to the adventure of building his tens of thousands of pounds and placing them cheerfully at the disposal of the client as cover for the architect's mistakes, almost impels me to flee from the stern North to the generous South.

Clutching at a straw "Positive" seizes on the point presented to him, that co-ordination is made more difficult under divided responsibility, and would now make it the main plank of his raft. But is not the whole tendency of modern practice making for divided responsibility? Does not the employment of an army of specialists chosen by the architect come to much the same thing, as far as co-ordination is concerned, as entering into individual direct contracts with the various trades?

Wriggle as he may, "Positive" cannot escape from under the pin that is holding him down, in so much that his special plea is still that the architect should, when he himself makes mistakes, be able to find refuge in the builder's pocket. Does this legalised system of pocket-picking make for either cheaper or better building? NEGATIVE.

BUILDING IN CANADA

BY A CANADIAN VISITOR.

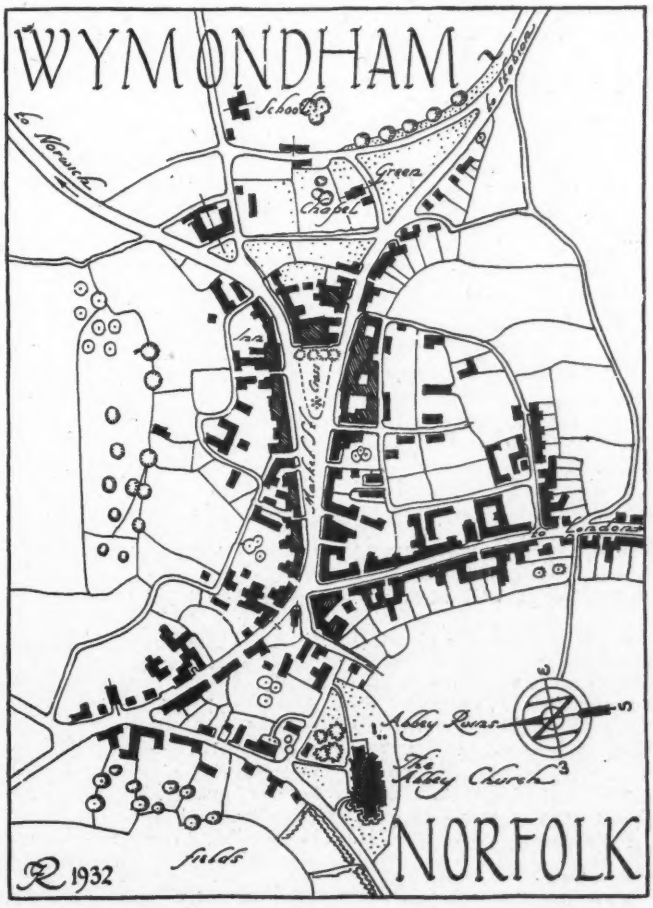
MY first visit to England for some years finds this country in a better condition than report had led one to believe. Whilst the position of Great Britain, with, as I understand, over 350,000 men unemployed in the building and public works group, is bad enough, it is no worse than the state of the industry in Canada. The Dominion did not begin to "feel the draught" until fifteen months ago, but since then building and construction has been slowing down until it is practically at a standstill. Toronto, Montreal, Ottawa, Quebec, the border towns and Winnipeg, have a glut of office accommodation. The Provincial and Municipal Governments have delayed their building programmes until the times improve. The position in which we stood after the first five months of 1932 is indicated by our MacLean Building Reports, which state that construction during those months reached a total of $62 millions (£16,300,000 at present rates), as compared with $133 millions (£35,000,000) during the corresponding period of 1931. Even more serious are the figures of contemplated new construction, which have dropped from $250 millions (£65,789,000) for the first five months of 1931 to $93 millions (£24,473,000) for the corresponding period of this year. There are signs that matters are slowly mending, but there will be no radical change until trade in general improves. In the meanwhile we are, so to speak, "tightening our belts" and employing the idle time in perfecting the building machine and its organisation.

Great things are expected in Canada from the Ottawa deliberations. They have served to remind Canada that she is part of a great Empire and have provided a much-needed antidote to the American influences which are dominant, because of our close proximity and their constant broadcasting. It would be a thousand pities if advantage is not taken by Canada and Great Britain of the channels of trade which will be opened up. Although the population of Canada is but 10,000,000, the Dominion is growing and the market is constantly expanding. There will be great opportunities for trade with Great Britain in certain building commodities. Amongst these are metal windows and stainless steel in its several applications to building. Constructional steelwork is another commodity of which Great Britain should supply more to Canada. At present nearly all structural steel is imported from the United States. Yet even in that country things are bad, as was shown recently when an order placed with an American company for $350,000 worth of steelwork could not be filled, as the amount of the order, nearly £100,000, did not make it worth while to reopen their huge steel works, built to supply the trade at the peak of prosperity and now closed owing to the depression. That is a point where British companies, who plan their works in smaller units, should score.

An additional point in their favour will be the opening of the St. Lawrence Canal, which will enable ocean-going vessels to sail direct to Fort William, at the head of Lake Superior. Even bigger opportunities for trade should occur in the direction of building stone. In Canada there is very little good building stone, for while there is a limestone in Quebec and Queenstown, it is intractable, and working costs are high. As a result we have to import largely from America, where the most favoured stones are Indiana limestone and Ohio freestone. Here is a chance for British stone quarries if they study two points. These are, firstly, that contractors will not keep large stocks on hand as it would be tying up too much capital; and secondly, the stone is much preferred when newly quarried. In effect, this means that to do business British stone firms will be asked to ship stone to order, to arrive in Canada by a specified date. While this may require careful organisation, the reward is there for those prepared to undertake it. There are few opportunities for bronze-work, there now being Canadian firms producing excellent results, and fewer still for terra-cotta, which does not suit the extremes of Canadian climate.

In Canada, buildings are so complicated because of their height and eccentric stresses and loadings that the architect, so far from tending to become a mere designer, is becoming more than ever the director and organiser. He interprets the clients' wishes in the form of a design for the required accommodation, and then calls in the structural engineer, the electrical engineer, the heating and ventilating engineer, and the plumbing expert (for all plumbing is arranged inside the building and must therefore be considered from the start). The correlation of the various works is not the least of the architect's job.

Finally, Canada is delighted with the prospect of greater inter-trade with the Mother Country. British firms will find that Canadians are prepared to do their part, and that already literature has been disseminated by architects in Canada advocating the benefits which should accrue from trade in building commodities between the two countries. English business men can help matters a lot in their dealings with Canada by taking their customers as they find them and by being accommodating to the conditions and customs of the Dominion.



ILLUSTRATIONS

PLATES

Men's Hall of Residence, Armstrong College.

THE new hall at Armstrong College has been erected to provide a residence for men students. It occupies an open site adjoining Cochrane Park, the College athletic ground at Benton, some half-hour's walk from the main College building. This site has been planned to take four other similar buildings placed around a spacious terraced garden, about 300 ft. wide, its short axis being central with the existing sports pavilion, the back of which is screened by a long, low garage block.

The new hall occupies the south-west portion of the site. Planned on the staircase principle, the rooms, dining-hall and Warden's lodge are arranged around three sides of a quadrangle measuring 155 ft. by 75 ft., the fourth side being free from buildings but enclosed by a panelled brick wall, with wrought-iron gates as a centre feature. The long axis of the group and of this building runs north and south, this giving the sunniest aspect for the greater number of rooms.

The south arm of the quadrangle is terminated by the Warden's lodge, which balances the common-room block on the north. Arched loggias beneath the flanks of these blocks form dual entrances to the quadrangle, on the west side of which is a panel containing the College arms, the quadrangle being laid out with lawns and paved walks. From the north loggia a vestibule leads to the dining-hall, which is planned to seat about one hundred people at table and is lit by three large bay windows on the south side and clerestory windows over the kitchen block to the north. Internally, the hall is panelled in oak to cornice height, the furniture being designed in the same material; at the west end is a daïs for the high table; at the east, a portion of the panelling folds back to form an opening into the common-room, a large room running at right angles to the hall, the floor of which is about 3 ft. above that of the hall, so that it can be used as a stage or platform. Over this room are placed the library, cloakroom, and second common-room. The kitchen is on the north of the hall, care being taken to give quiet as well as quick service. This block also contains the housekeeper's office and servants' hall, and a series of servants' bedrooms are reached by a separate staircase.

Grouped in series of twelve to each staircase, the students' rooms are arranged as study bedrooms, each having a built-in wardrobe and fixed lavatory basin. Each staircase has its own bathrooms, lavatories, and small pantry. In one block the accommodation comprises bedrooms and sitting-rooms, together with a common-room for senior students or members of the staff; and, in another, two isolation rooms with separate services are provided. A continuous corridor has been arranged over the top floor throughout the building for linen, boxes and boot-cleaning rooms, connected with each floor by small service lifts.

The walls are of 2¼ in. old English sand-faced brick, finished at the eaves level with a simple moulded brick cornice, the dressings being in Blaxter stone, a light-toned local sandstone. The roof is covered with hand-made sand-faced horseshoe roofing tiles. The staircases are in reinforced concrete finished with teak risers and treads. The floors are of fire-resisting construction and generally finished with linoleum, except for the hall and common-room, which have oak boards, and the kitchen, where the floor is of tiled terrazzo. The heating is by low-pressure hot-water radiators served from boilers under the kitchen block. The lavatory basins are fixed around open shafts, in which all hot and cold water and waste pipes are carried. The rooms are also ventilated with these shafts, which are therefore carried up above the roof.

The consultants were as follows :—Electrical work, Professor Thornton; steelwork, Messrs. Reade, Jackson and Parry; acoustics, Mr. Hope Bagenal. The clerk of works was Mr. Lawson, assisted by the late Mr. Rawling.

The general contractors were Messrs. J. R. Rutherford and Sons, and the principal sub-contractors were as follows :—H. Walker and Sons, Newcastle, heating and ventilation; Charles Nicholsen, Newcastle, roof tiling; Matthew Charlton, Newcastle, plumbing; Fletcher Bros., Newcastle, electrical work; Pickerings, Stockton-on-Tees, hoists; Hollow Steel Floor, Middlesbrough, fire-resisting floors; Richard Hill, Middlesbrough, reinforcement for foundations; Stuart's Granolithic Co., Edinburgh, concrete staircases; Crittall Manufacturing Co., metal windows; Shanks and Co., Barrhead, sanitary fittings; Toffolo, Jackson and Co., Glasgow, terrazzo; Tapling, Newcastle, linoleum; M. Aynsley, Newcastle, ironwork to staircase; H. Walker, Newcastle, iron gates; Emms and Elsley, London, cast-lead work; J. Armitage, London, carver; Carron Co., Falkirk, kitchen equipment; N. F. Ramsay, Newcastle, ironmongery; Mellowes, Sheffield, roof lights; Robson, Newcastle, furniture; Merrillees and Denton, Gateshead, painting and glazing.

Mr. A. Dunbar Smith, F.R.I.B.A., is the architect.

New County Offices, Warwick.

These new buildings are of steel-framed construction, the stanchions and joists being encased in concrete throughout. Most of the external walling is of brickwork, with a 2 in. cavity, faced with hand-made, sand-faced, multi-coloured bricks. A portion of the walls is faced with reconstructed stone ashlar walling, the plinths, cornices, and other masonry features and dressings being also of reconstructed stonework. Fire-resisting construction is employed throughout, all floors, flat roofs and principal stairways being of ferro-concrete, with wrought-iron staircase balustrades.

The basement floor is devoted principally to storage accommodation, and contains four fire-resisting strong rooms for the storage of records. The walls of the strong rooms are of blue brick and the floors forming the ceilings of the strong rooms have been specially constructed of concrete 12 in. thick, with adequate steel reinforcement. The walls and floors of the strong rooms are lined with asphalt, and these rooms are fitted with steel fire-resisting doors and with special fire-resisting strong room ventilators.

The main roofs are of timber construction supported on steel principals, covered with slating on boarding. The majority of the slates used are old Westmorland slates, arising from the demolition of an old mansion, "Old Delabole" grey-green slates being employed for the remainder. Metal casement windows in wood frames have been provided throughout, the internal window sills being finished with black glazed tiles. The external entrance doors are of teak. It should be noted that little internal walling has been provided, and internal partitions have been eliminated as far as possible, but where these occur they are constructed of light timber framing, sheathed with patent compressed fibre boards. A number of the internal partitions are glazed with clear glass for purposes of supervision and control, and the partitions throughout are so constructed that their positions can be easily rearranged should necessity arise. Local materials have been used wherever possible.

The concrete floors in the offices and corridors generally are covered with linoleum on an underlay of cork, while cork parquetry flooring has been employed for the more important rooms. The flooring to the entrance halls and principal staircases is of marble terrazzo, with wall dadoes of the same material; all lavatories have terrazzo flooring and walls lined with ivory white glazed tiles. The internal walls and ceilings generally are plastered and treated with "Walpamur." The internal woodwork, doors, and finishings, etc., are of red fir, painted. Heating is by means of an accelerated low-pressure, hot water heating system, with pipes and radiators, the boilers being housed in the basement heating chamber, and a domestic hot water system is installed to provide hot water in all the lavatories. Electric lighting, with simple lighting fittings of a modern character, have been provided, and electric plug points are fitted throughout the building for electric floor polishers.

The building is fitted with an up-to-date suction cleaning plant. The internal automatic telephone installation provides intercommunication between each room in the building. Internal fire hydrants connected with the town water supply have been provided, together with an adequate number of modern non-damaging chemical fire extinguishers. An electric passenger lift is installed to one of the principal staircases.

Stone carving and sculpture to principal entrance doorways were executed by Mr. William Bloye, of Small Heath, Birmingham. A stained glass memorial window, given by the staff in memory of two of the late Clerks of the Council, has been executed by the Bromsgrove Guild, Ltd.

The cost of the work, including all services, furniture and fittings, is £107,000

The general building contractor was Mr. Edgar Crowder, of Handsworth, Birmingham, and the following firms were associated with the work :—Chas. Wade and Co., Ltd., Birmingham, constructional steelwork; Jerram and Co., Ltd., Derby, heating and domestic hot water supply; the Midland Electric Light and Power Co., Ltd., Leamington Spa, electric lighting and power installation; the Sturtevant Engineering Co., Ltd., vacuum cleaning plant; the Reliance Telephone Co., Ltd., internal automatic telephone installation; Waygood Otis, Ltd., Birmingham, electric passenger lift; Comyn Ching and Co., Ltd., iron entrance gates, staircase balustrades, lift entrance, and door furniture, etc.; the Crittall Manufacturing Co., Ltd., Leicester, metal windows; the Limmer and Trinidad Lake Asphalt Co., Ltd., Birmingham, asphalt roofing, etc.; Adamsez, Ltd., Scotswood-on-Tyne, sanitary fittings; the Croft Granite Co., Ltd., Croft, nr. Leicester, reconstructed stone facings and cast stone staircases; Wormells, Ltd., Coventry, slating to roofs; Whitfields Safe and Door Co., Ltd., Birmingham, fire-resisting strong room doors and ventilators; Carter and Co., Poole, internal wall tiling; Marbello and Durus, Ltd., and the Pavino Flooring Co., Ltd. (both of Birmingham), and Berrite, Ltd., Hanwell, terrazzo flooring and wall dadoes; W. S. Hodkinson and Co., Ltd., Manchester, linoleum floor coverings; John Elbo, cork parquetry flooring; Osler and Faraday, Ltd., electric light fittings; J. F. Blakeborough and Son, Brighouse, Yorkshire, fire-fighting equipment; Thomas Ingram, Birmingham, bronze and cream enamel inscription plates; Bidford-on-Avon Brick Co., facing bricks; S. Flavel and Co., Ltd., firegrates; Edgehill Quarries, Hornton stone fire surrounds.

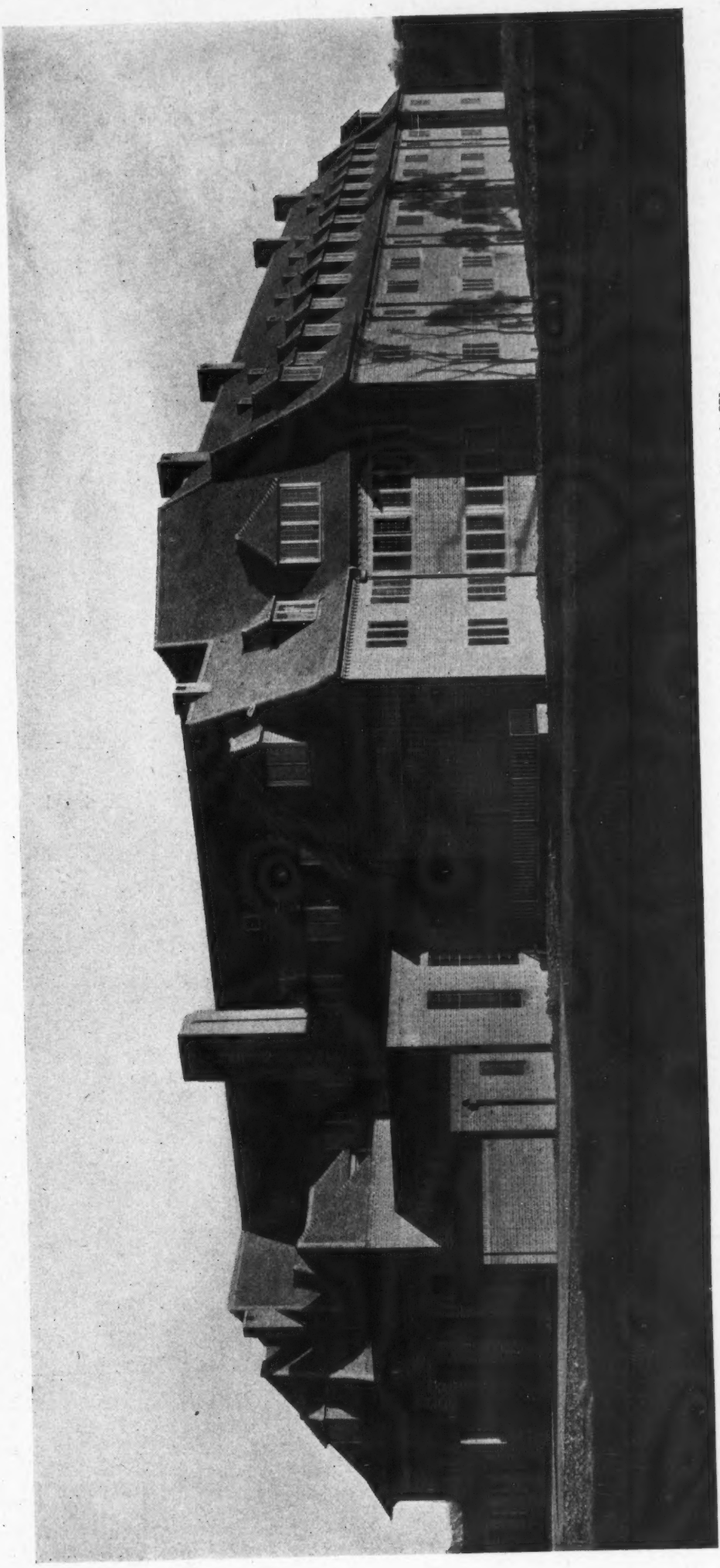
The quadrangles are laid out with plots of turf, the roadways being constructed of wood block paving by the Improved Wood Pavement Co., Ltd. The paths and footways are paved with "Vinculum" cast stone slabs, supplied by Tarmac, Ltd., Wolverhampton. The pond in the inner quadrangle, which is constructed of reinforced concrete rendered inside with white cement and "Pudlo" waterproofing, has been provided as a storage tank for water in the event of fire, owing to the possibilities of lack of water pressure in the mains.

Internal furnishings and fittings have been carried out by the following firms :—Shapland and Petter, Ltd., Barnstaple, Devon, limed oak furniture to the committee rooms, and other principal rooms; Waring and Gillow, Ltd., and Osda, Ltd., oak tables, chairs, bookcases and other fittings and furnishings to the offices generally; Harris and Sheldon, Ltd., steel furniture and fittings throughout; P. H. Woodward and Co., Ltd., Leamington Spa, and W. H. Hodkinson and Co., Ltd., Manchester, curtains and hangings, etc.

The architect is Mr. A. C. Bunch, F.R.I.B.A., County Architect.

Scarborough Hospital Competition.

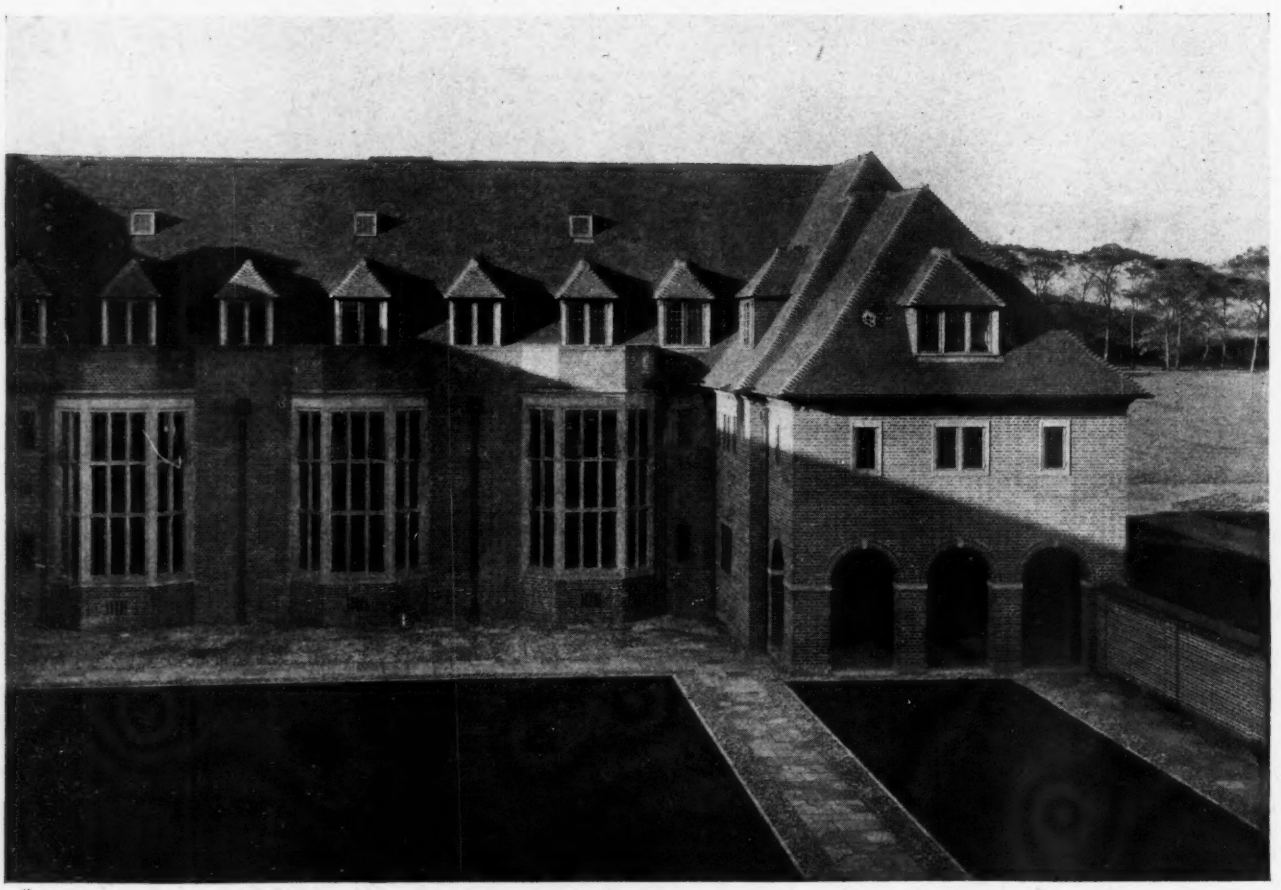
The award of the assessor in this competition is given under Competition News, page 670. We illustrate this week the first and second premiated designs, by Mr. Wallace Marchment, F.R.I.B.A.. and Messrs. Dawson, Oliver and Associates respectively.



Armstrong College, Newcastle-on-Tyne: Men's Hall of Residence. View from North-West.

MR. A. DUNBAR SMITH, F.R.I.B.A., Architect.

View from South-East.



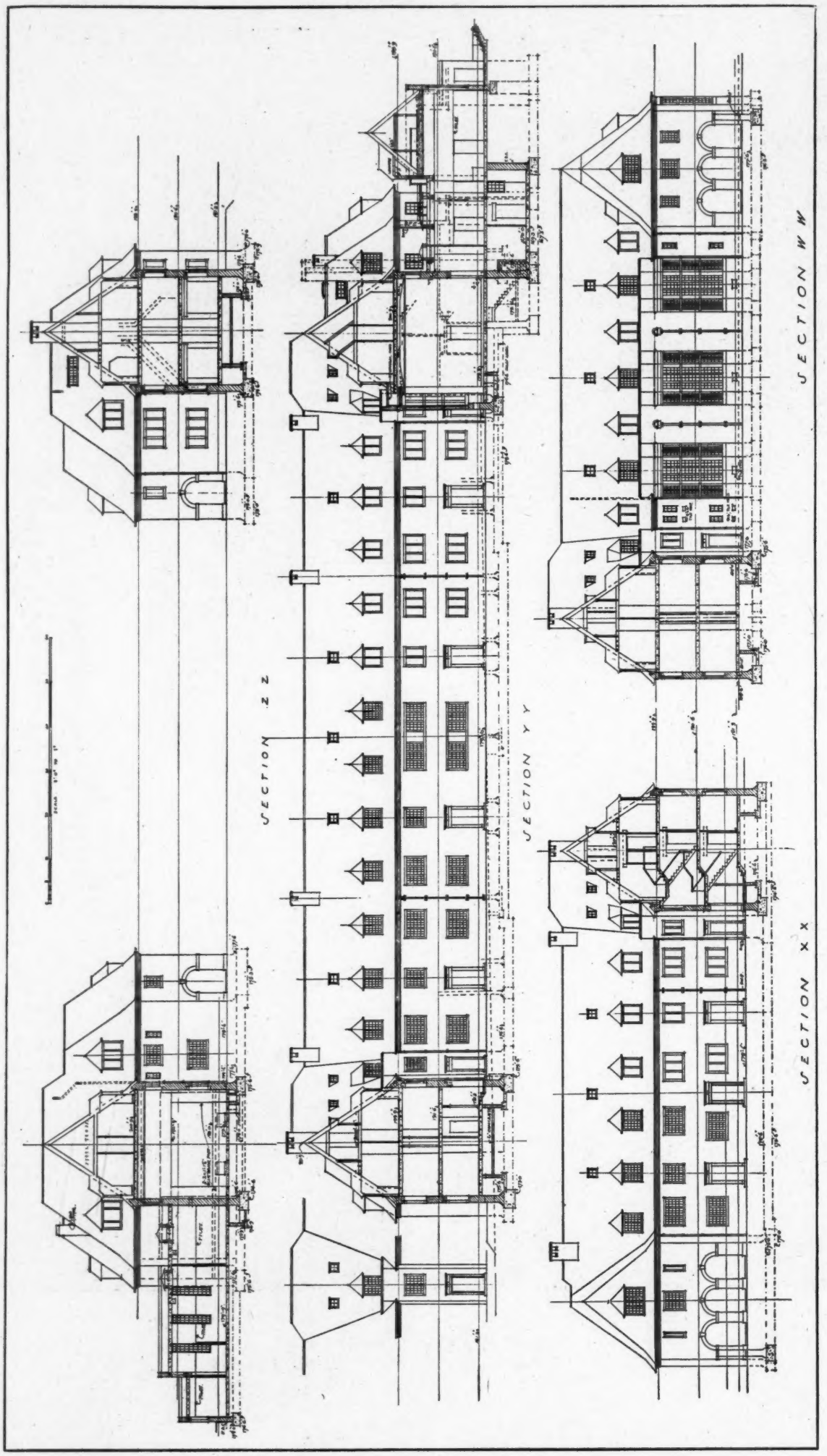
View in Quadrangle.

Armstrong College, Newcastle-on-Tyne: Men's Hall of Residence.

Mr. A. Dunbar Smith, F.R.I.B.A., Architect.

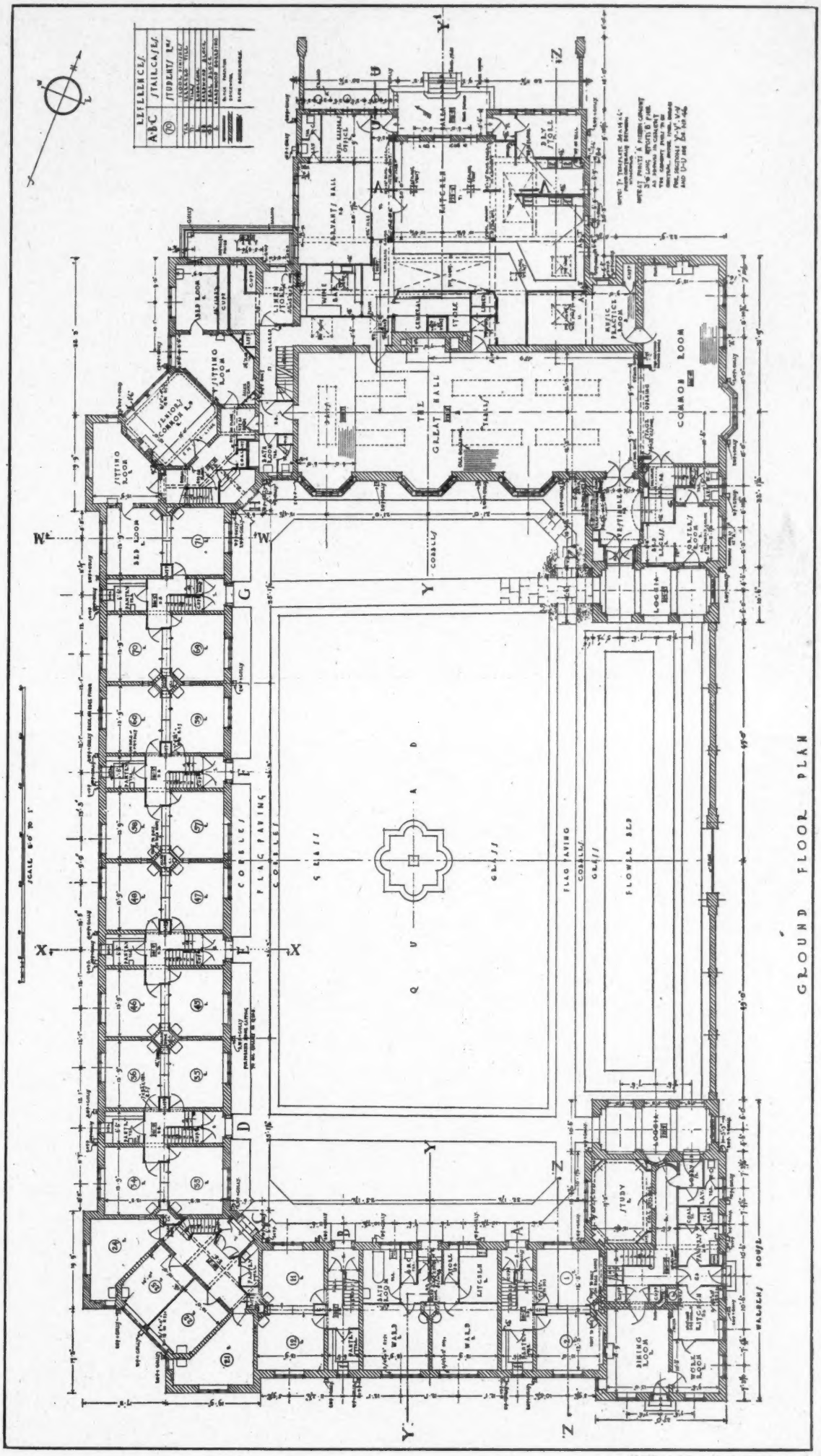
Armstrong College, Newcastle-on-Tyne. Men's Hall of Residence : The Great Hall.

Mr. A. Dunbar Smith, F.R.I.B.A., Architect.



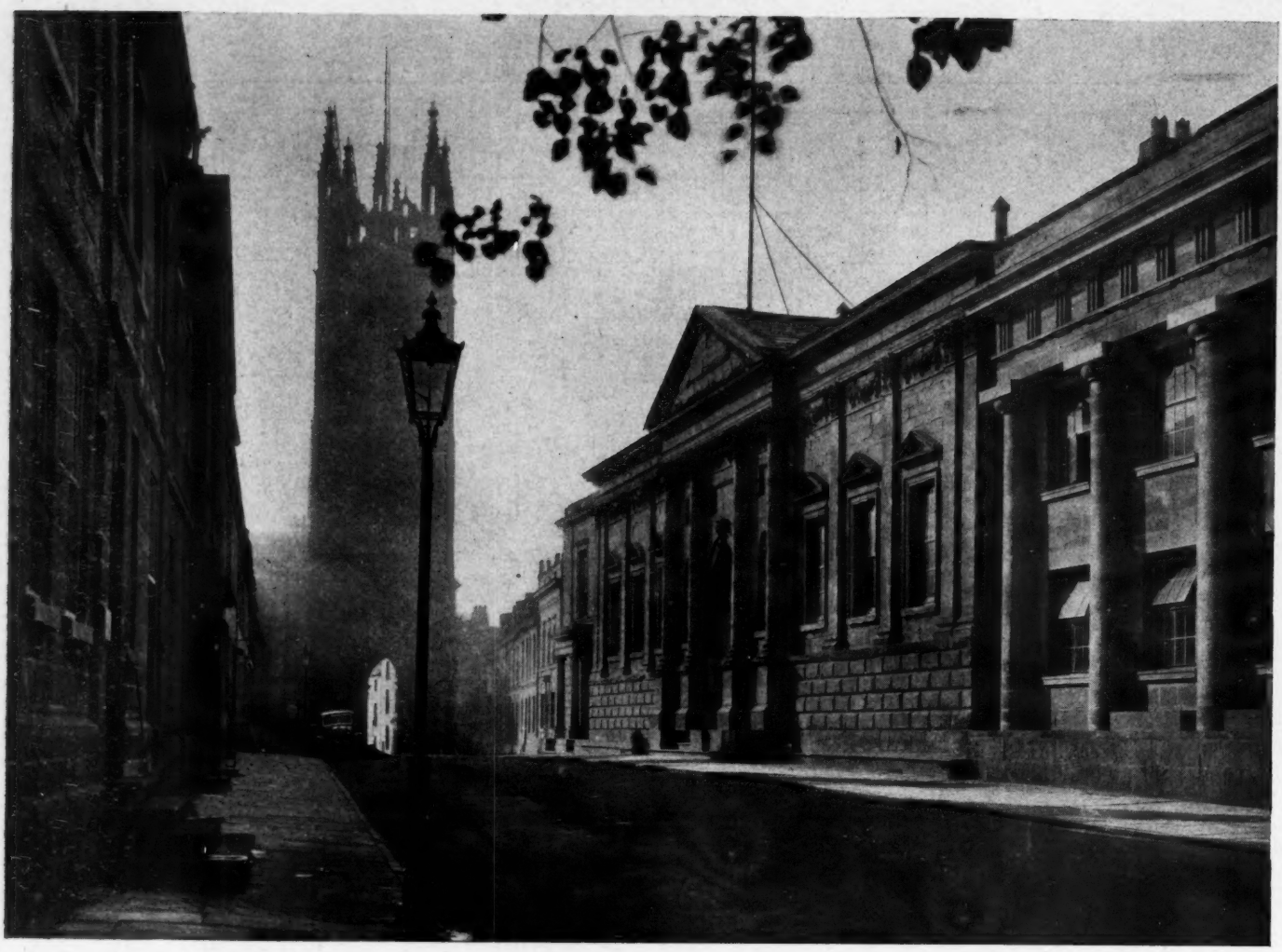
Armstrong College, Newcastle-on-Tyne: Men's Hall of Residence.

Mr. A. Dunbar Smith, F.R.I.B.A., Architect.

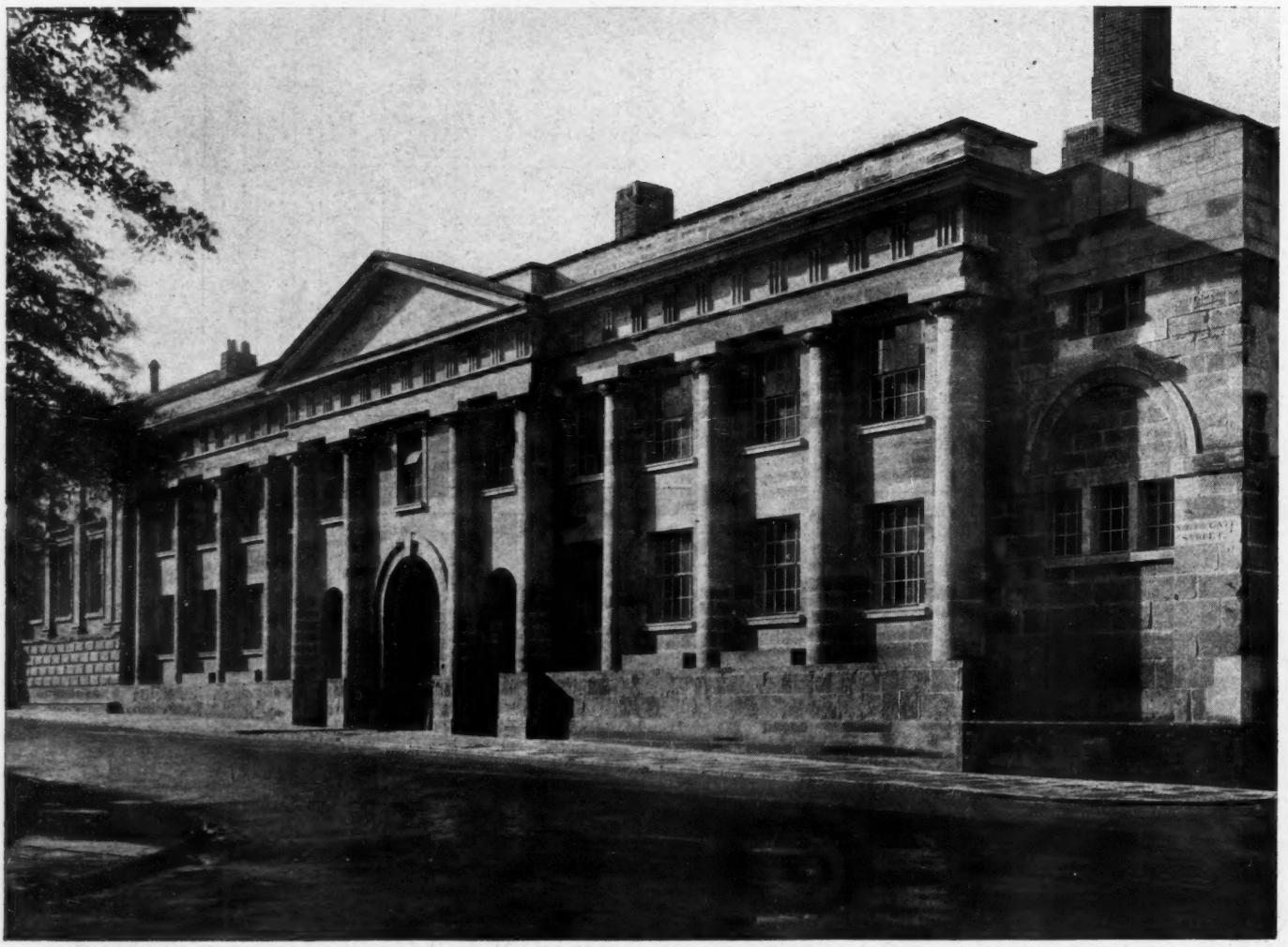


Armstrong College, Newcastle-on-Tyne: Men's Hall of Residence.

MR. A. DUNBAR SMITH, F.R.I.B.A., Architect.



SHIRE HALL AND EXTENSION.



FACADE OF OLD BUILDINGS AS ALTERED AND RECONDITIONED.

New County Offices, Warwick.

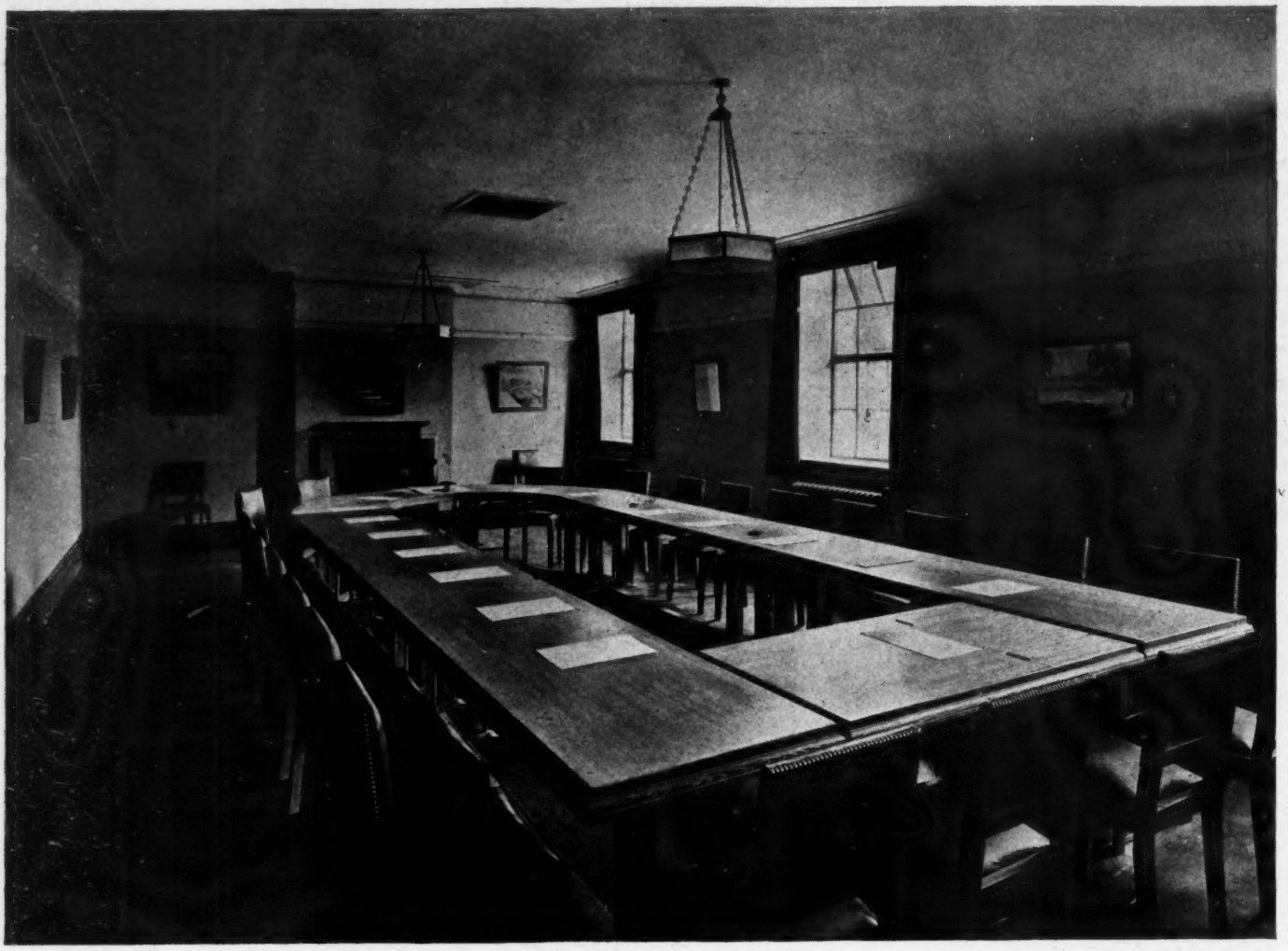
MR. A. C. BUNCH, F.R.I.B.A., County Architect.

ENTRANCE TO OFFICES FROM OUTER QUADRANGLE.

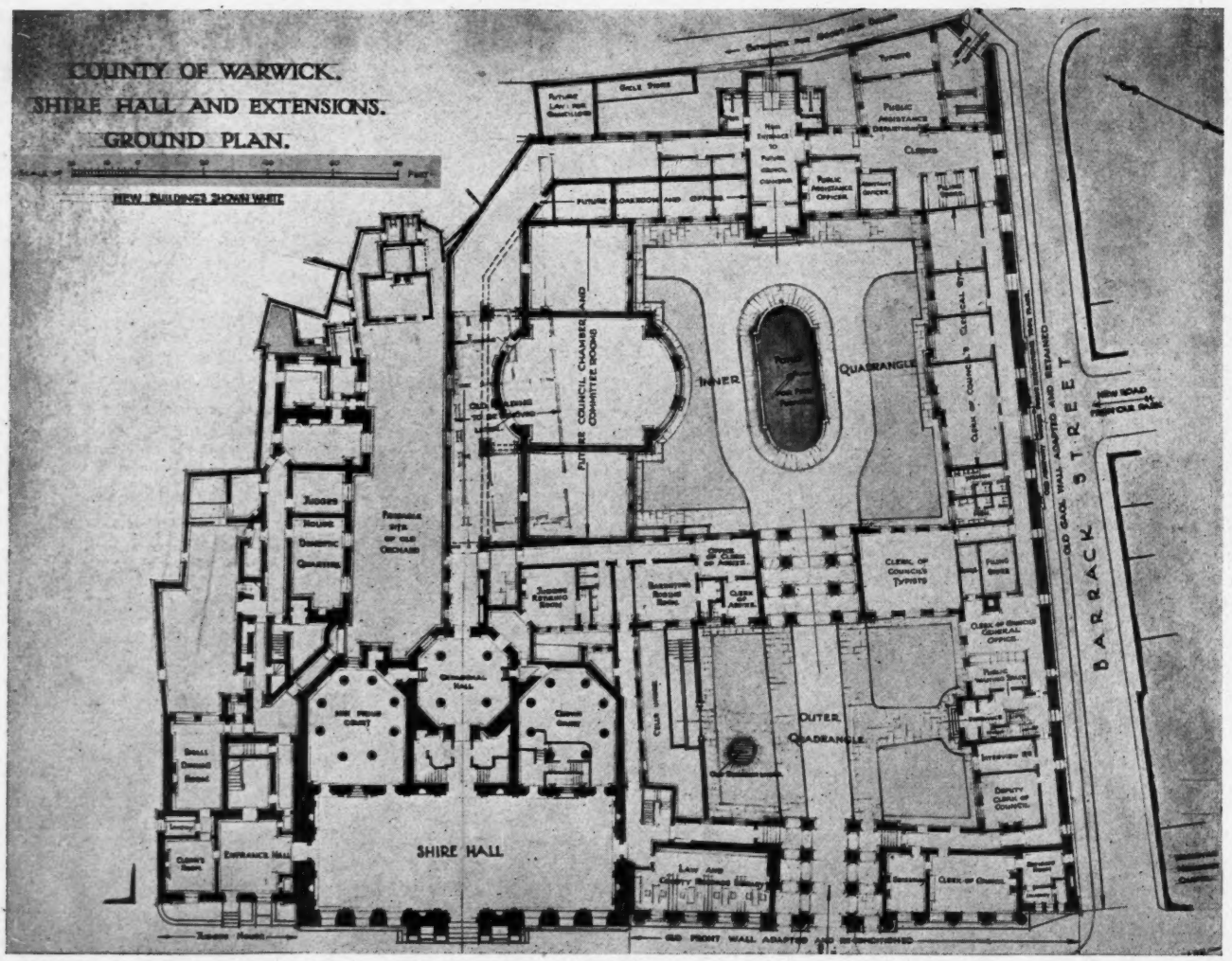
INNER QUADRANGLE AND MAIN ENTRANCE.

New County Offices, Warwick.

Mr. A. C. Bunch, F.R.I.B.A., County Architect.



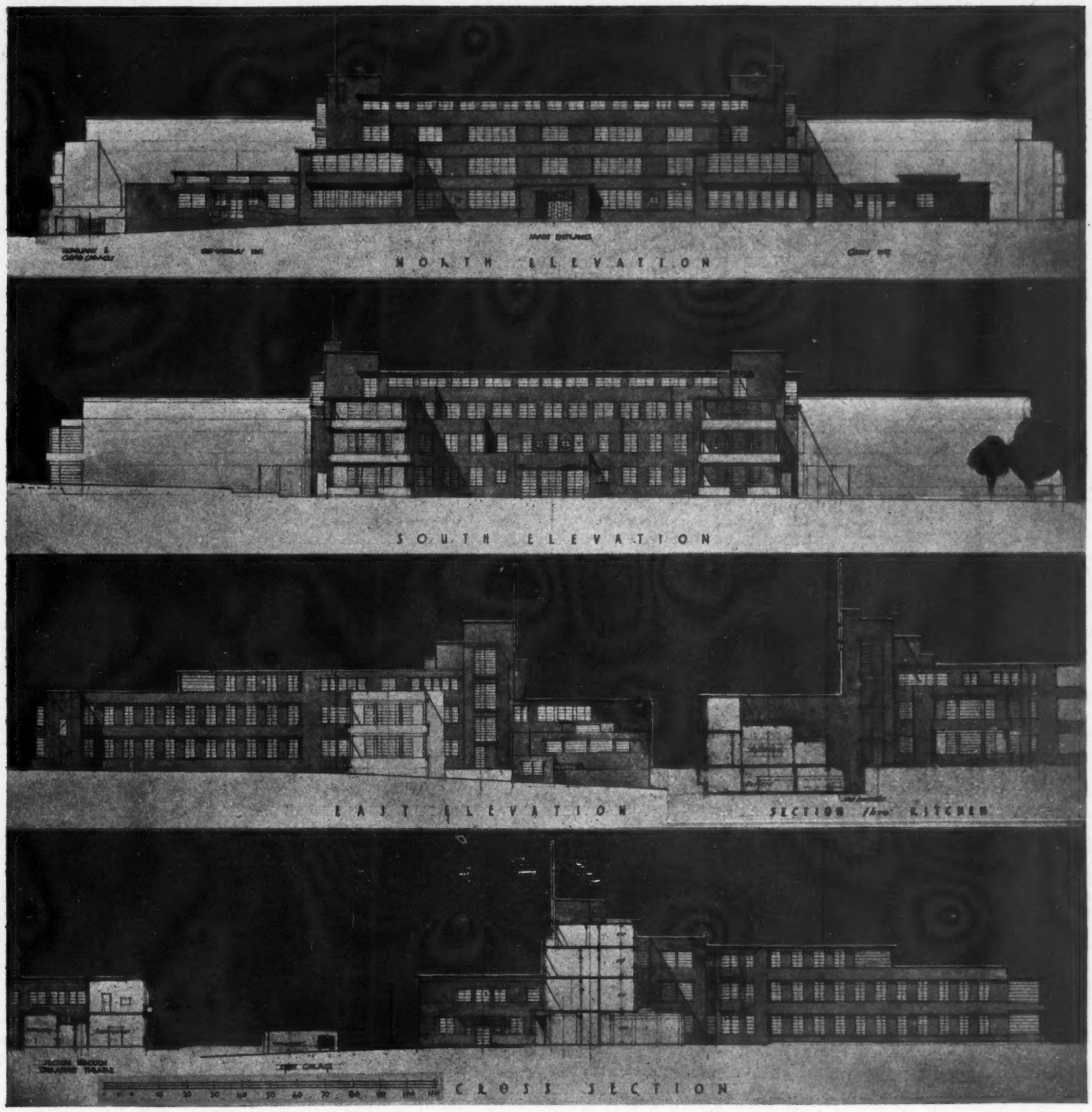
A COMMITTEE ROOM.



GROUND-FLOOR PLAN OF NEW AND OLD BUILDINGS.

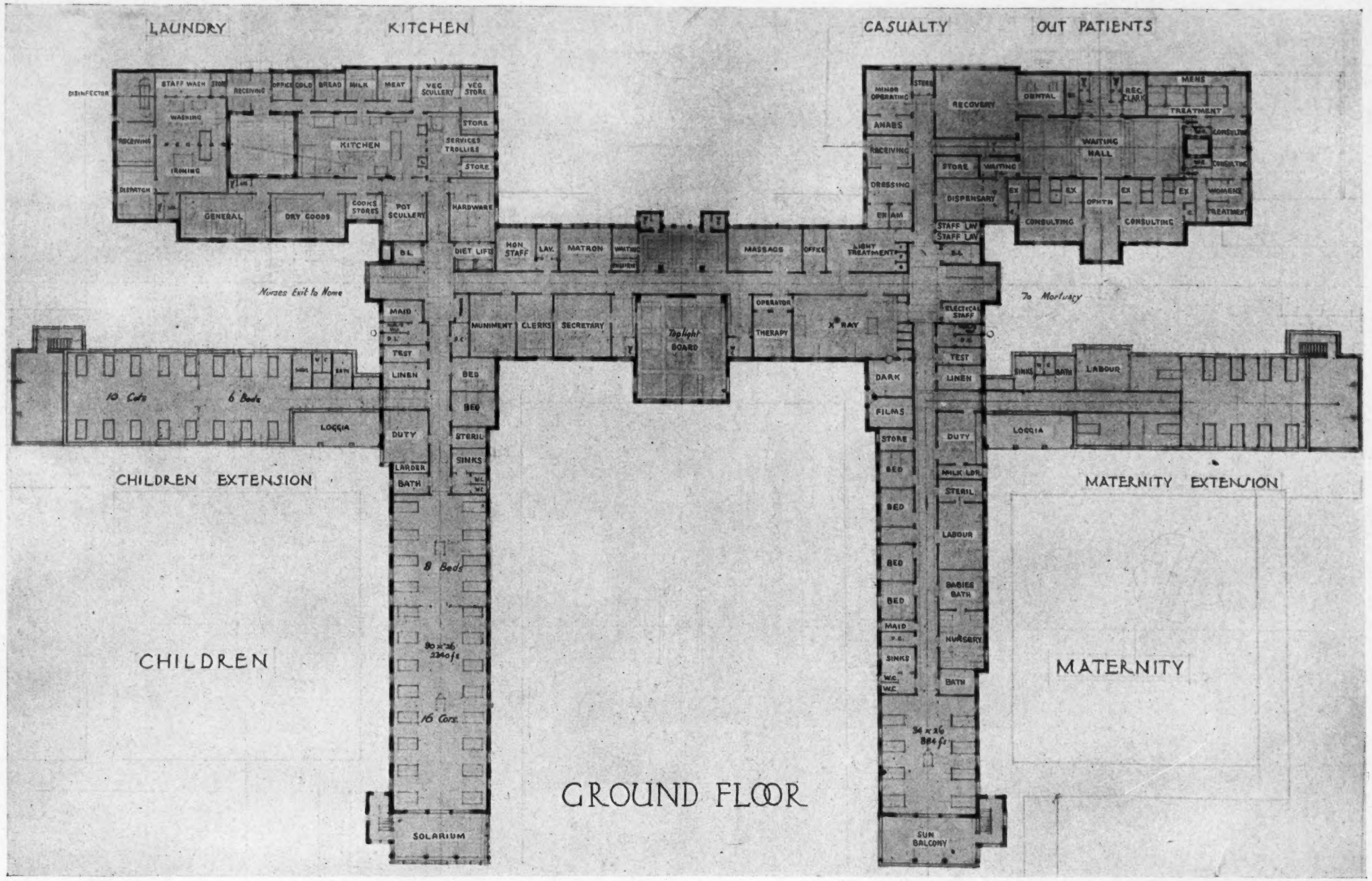
New County Offices, Warwick.

Mr. A. C. Bunch, F.R.I.B.A., County Architect.



Scarborough Hospital and Dispensary Competition: First Premiated Design.

MR. WALLACE MARCHMENT, F.R.I.B.A., Architect.



Scarborough Hospital and Dispensary Competition: First Premiated Design.

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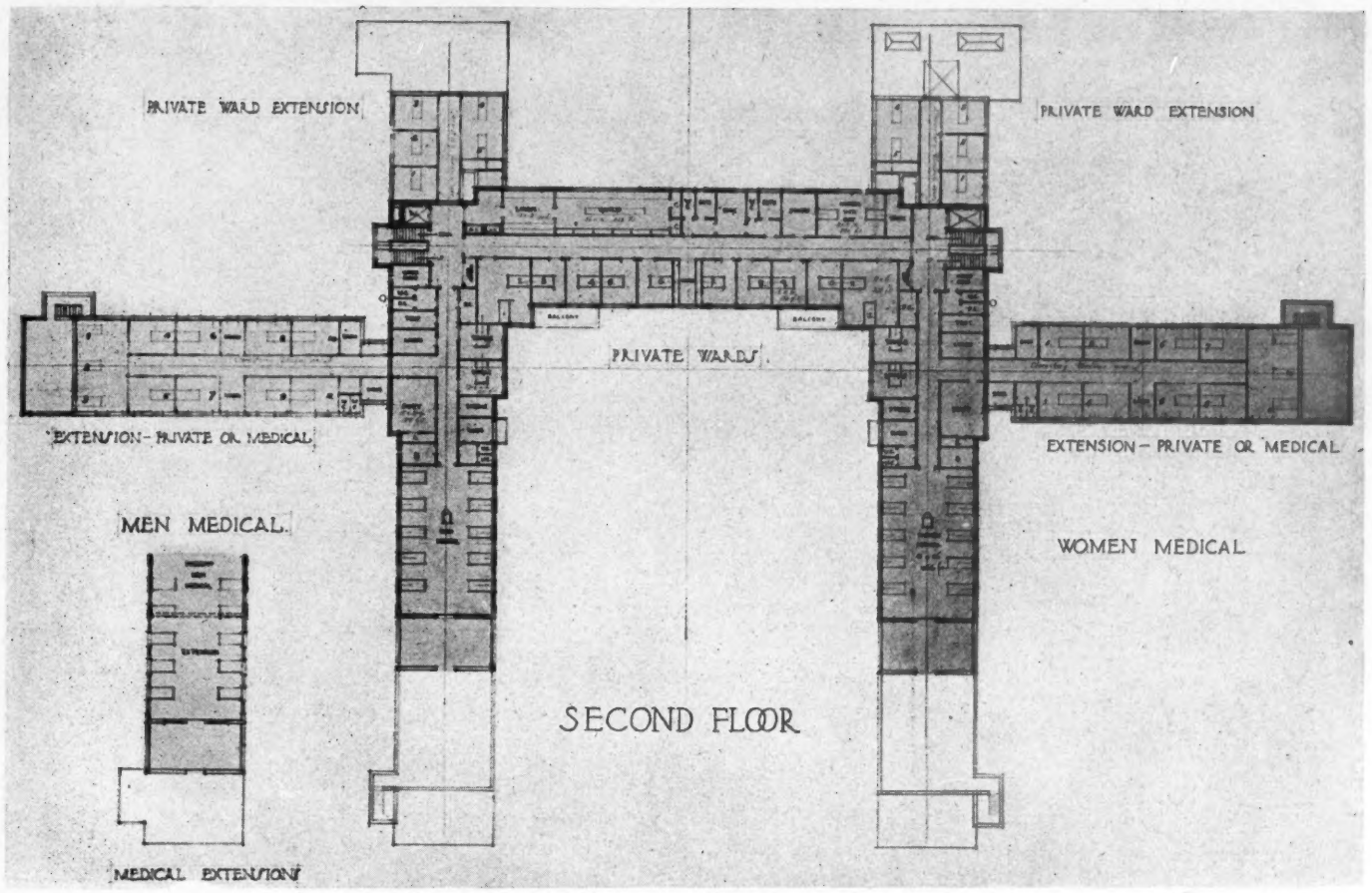
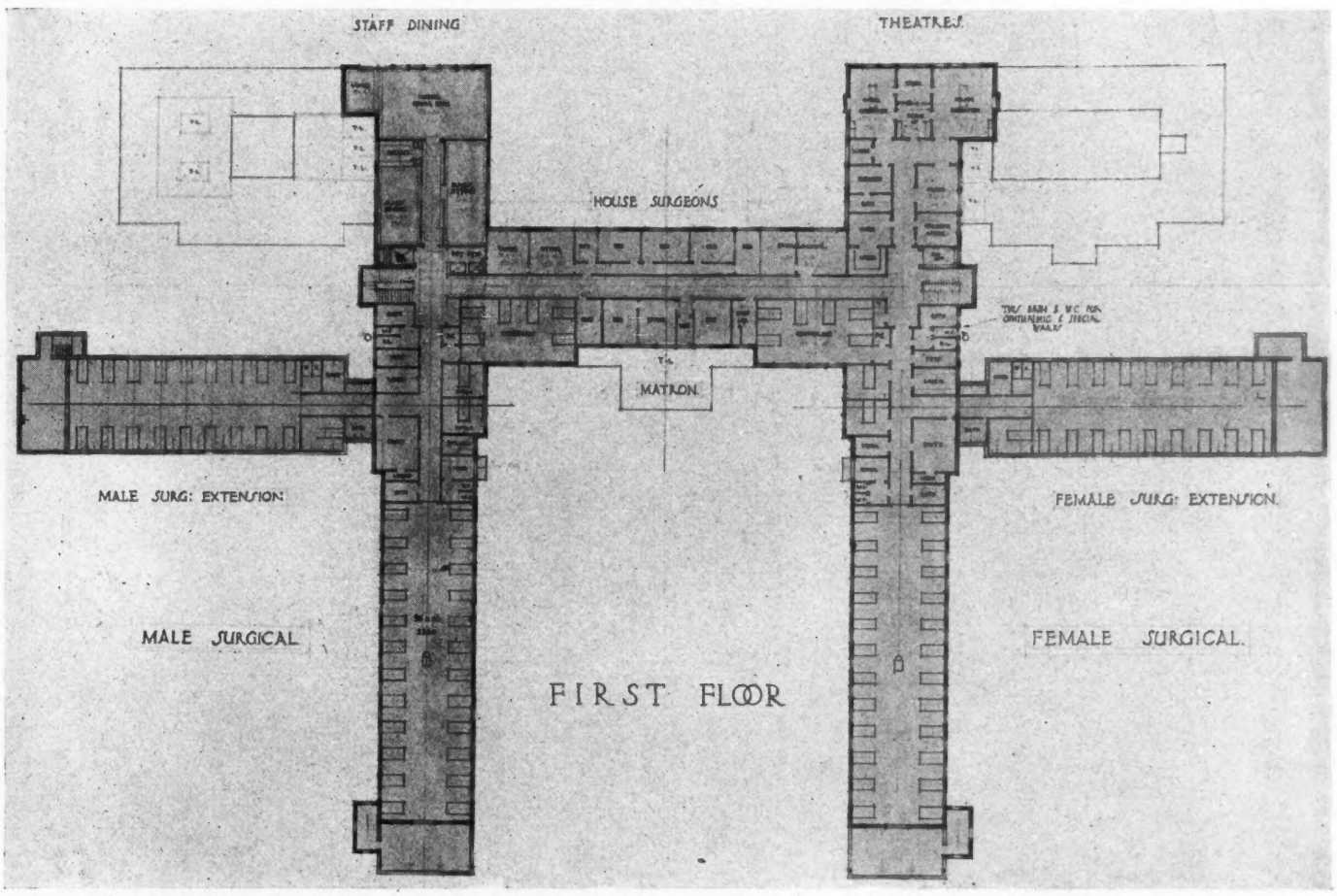
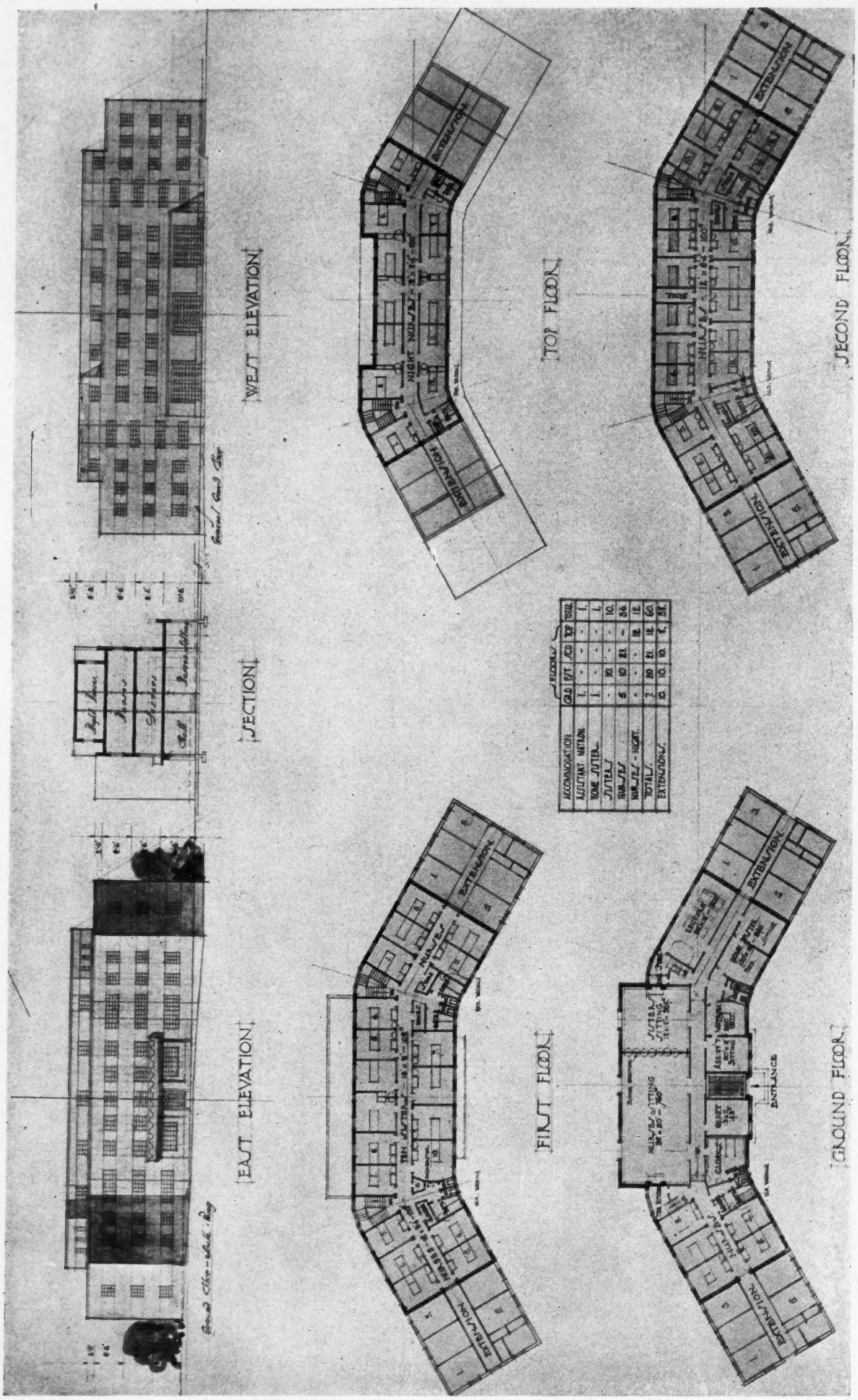




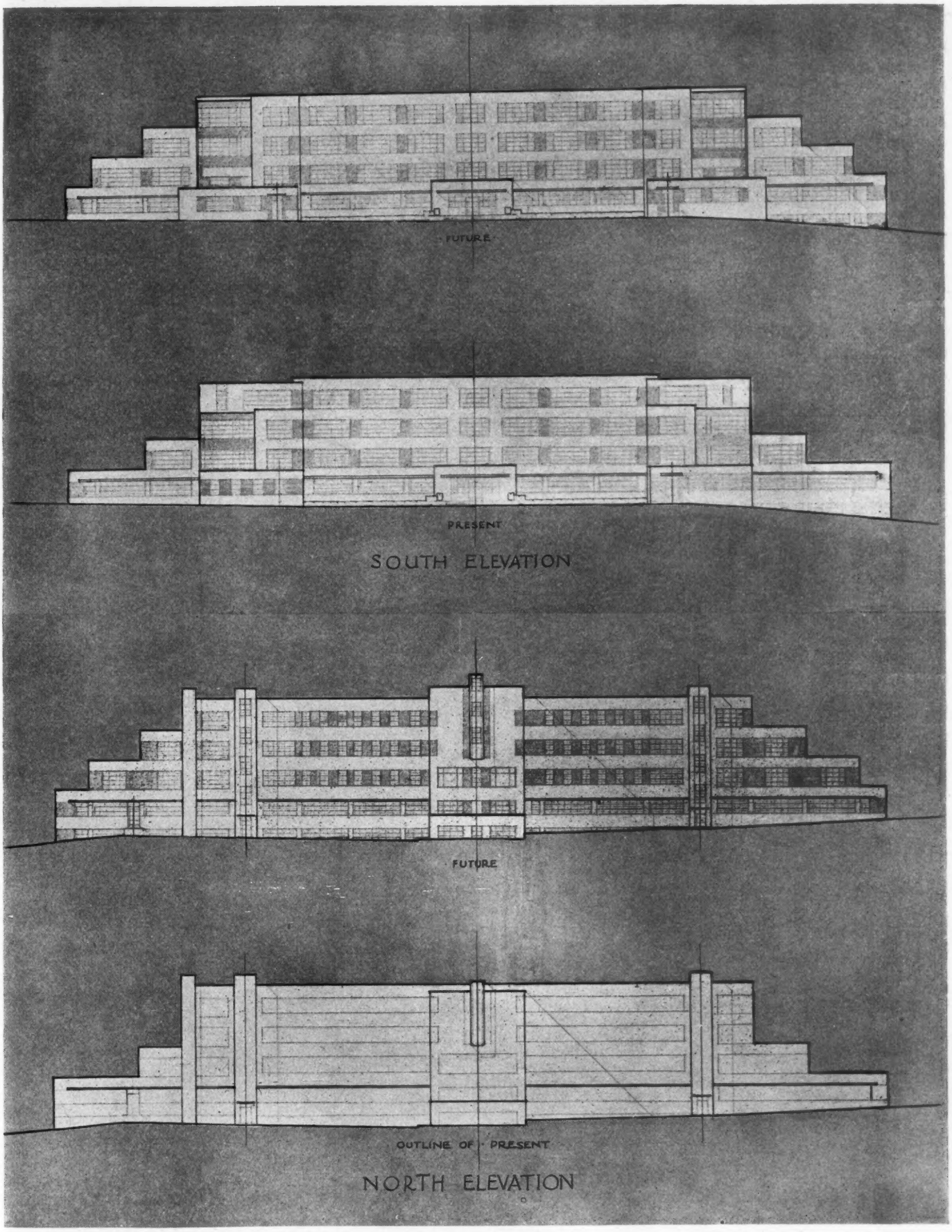
Scarborough Hospital and Dispensary Competition: First Premiated Design.

MR. WALLACE MARCHMENT, F.R.I.B.A., Architect.



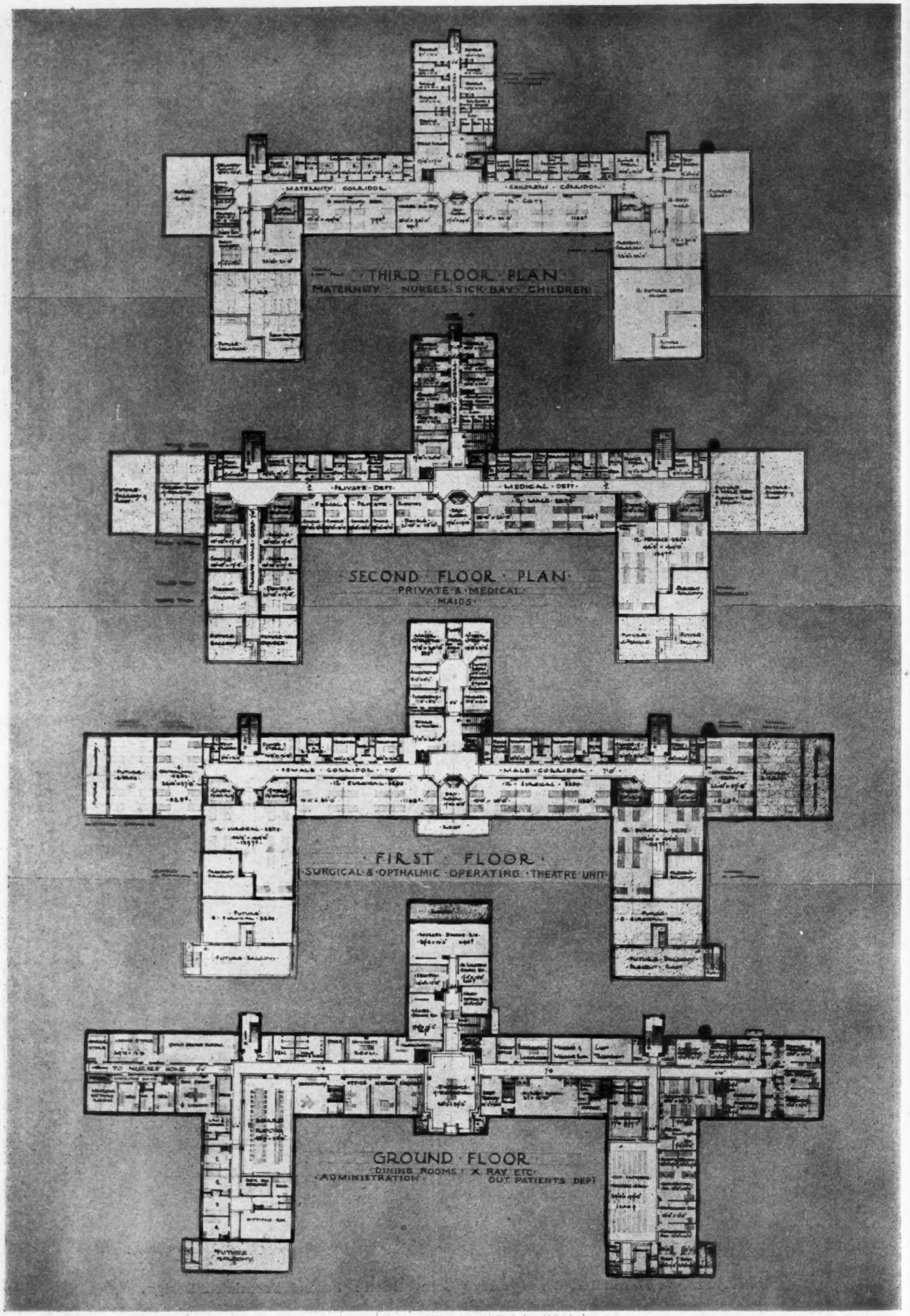
Scarborough Hospital and Dispensary Competition: First Premiated Design: The Nurses' Home.

MR. WALLACE MARCHMENT, F.R.I.B.A., Architect.



Scarborough Hospital and Dispensary Competition: Second Premiated Design.

BY MESSRS. DAWSON, OLIVER AND ASSOCIATES.



Scarborough Hospital and Dispensary Competition: Second Premiated Design.

BY MESSRS. DAWSON, OLIVER AND ASSOCIATES.

THE MODERN SMALL HOUSE.

THE first of a series of five non-technical lectures (illustrated by lantern slides) was given at the Architectural Association, Bedford-square, last Saturday, by Mr. A. W. Kenyon, F.R.I.B.A., his subject being "The Small House." Councillor A. R. Pelly (Welwyn Garden City) presided.

The lecturer said that reduced incomes and lack of domestic help had brought the small house into prominence, and houses with two or three bedrooms were now those for which there was most demand. Not long ago London houses were built with basement kitchens, but servants did not like being shut up in a cellar with very little light and no outlook, and the difficulty of getting them had led to houses being built with kitchen and scullery on the ground floor and, eventually, when the housewife found she had to take a hand in the running of the house and herself live a considerable part of the day in the servant's quarters, to the planning of better and simpler kitchens. To-day the kitchen must be sunny and look out on to the garden. Sculleries and washhouses were gradually vanishing, and the kitchen was becoming a workshop where meals were prepared and cooked, where washing-up was done, where water was heated for all purposes, where washing that was not sent to the laundry was dealt with, being hung up to dry on properly constructed racks that were raised and lowered by means of ropes and pulleys. The kitchen range had gone because no one wanted to light the fire, take out the ashes and clean the flues. A cooker heated by gas or electricity had taken its place. Coal firing remained for boilers to heat water for baths and radiators, but how long that would remain the case depended on the cheapness of gas and electricity: he had already built two small houses without fireplaces or flues, where lighting, cooking and heating of water were all done by electricity.

Neither the old stone sink nor the yellow sink made of fireclay was in existence in the modern small house. Now we had a deep white earthenware sink with a proper plug and chain, and with draining boards on each side, all supported from the walls and not built on brick piers. It was therefore possible to plan a kitchen where the various necessities could be arranged in their proper sequence. The cooker could be near the sink so that the carrying of water for cooking purposes did not entail a walk, and the sink could be near the dresser so that the washed-up dishes could be quickly put away. The kitchen was no longer an unpleasant room in which to sit; many people used it as a breakfast room. As no great amount of food was stored in a modern house, the larder need only be small.

The drawing-room, parlour, sitting-room—whatever one chose to call it—was a place to live in, not filled with unnecessary furniture, but a simple apartment with the necessary comforts. The dining-room was kept for meals only. In the days when the dining-room was the only one in which there was a fire the room needed to be large, so that the table could be pushed up to the wall and easy chairs drawn around the hearth; but to-day it could be small, all the furniture required being a table, chairs and sideboard. If the sideboard were built back-to-back with the dresser in the kitchen, then dishes and cutlery were easy of access through a hatch to both rooms.

The lecturer said he felt that in a small house there should be one good-sized room on the ground floor, and this could often be effected by throwing dining- and living-room into one, separating them at other times by means of folding doors or curtains. The entrance hall to-day was small. It was a good thing if it was so planned that the staircase was not the first thing seen on entering the house. The staircase had been very much simplified, the balustrade being sometimes made into a solid wall.

If the ground floor were small, the bedrooms also must be small. Space could be saved by reducing the quantity and size of furniture. All that was really required was a bed, a built-in wardrobe cupboard and a dressing table with drawers. A lavatory basin should be fitted in every bedroom; the bathroom then would not be required for making one's toilet, but could be left free for bathing. It could, therefore, be small. A box room and a linen room were both necessary, and if the architect were clever he might be able to find room for them even in a small house. To-day, very few houses, however small, did not contain their own garages—usually housed in a building attached to the house, and taking up about as much space as the dining-room.

Fireplaces, said the lecturer, he would like to see done away with entirely in the small house. They took up a lot of space and made planning much more complicated. In the case of a bedroom, the space saved might be used for a wardrobe cupboard. Of labour-saving devices, the greatest was good planning, and the other things were ample hot water, both for heating and washing, plenty of light and power plugs, easily cleaned floors and built-in fitments.

Dealing with the question of siting, the lecturer said the majority of people preferred to live on a main road. If houses were built in a quadrangle or grouped around trees, would-be purchasers would complain that there was nothing to see. Consequently we were stretching out the suburbs in long, thin, unsatisfactory lines. It was impossible for this sort of thing to go on, and we must develop the land behind the roads in properly constructed culs-de-sac. This had been done very successfully in many places, and such houses had wider frontages and gardens than houses built on the roads.

The lecturer put in a word for the preservation of trees. In order to build small houses, he said, trees were ruthlessly cut down, and he had seen a row of fine chestnuts in their prime destroyed to make room for a line of houses, which could very well have been set back, leaving the trees to be a pleasure to the occupants of the houses.

The lecturer concluded that the definite improvement taking place in house designing had not yet penetrated so far as some of the new developments in the suburbs of London, but was to be found in housing schemes built since the War, and in places like Hampstead Garden Suburb, Letchworth, Welwyn Garden City, the London County Council housing estates and many private estates throughout the country. These places required every encouragement and support.

Votes of thanks were passed to the lecturer and the chairman.

SHEFFIELD AND SOUTH YORKSHIRE ARCHITECTS

THE President's inaugural address was delivered to the Sheffield, South Yorkshire and District Society of Architects and Surveyors at 15, St. James's-row, Sheffield, on October 13, by Mr. J. Lancashire, F.R.I.B.A.

The President opened his address with some remarks on the question of "The Articled Pupil." It was common knowledge that most firms of architects and surveyors were approached by parents or guardians of boys on completing their scholastic education, inquiring if there was a vacancy for a pupil. Personally, he advised that the boy should take, if possible, a full-time course in the architectural department at a university, and by suggesting that course he considered that he was consciously acting in the boy's best interests. In a busy office the principals, in some cases, could not devote sufficient time to supervise the pupil's work, neither could they give the same uninterrupted personal attention that a student received at a recognised school of architecture or civil engineering and surveying. There were, of course, cases where parents might not be in a position financially to afford the full-time course of study; in such an event, the articled pupil principle might be the only alternative, but even then, it might be possible to arrange for a part-time course. A university training, followed by a practical office experience, was the ideal combination, and would, no doubt, obtain the most satisfactory results. At Sheffield University a full five-year day course had been established, and lectures on all subjects required for the full professional qualification were given in the architectural department. The department had grown from four full-time students in 1927 to eighteen, and the number of part-time students had also increased. But Sheffield and District even now could afford a larger school, and with the larger school might come recognition of the full course exempting from the final examination of the R.I.B.A.

As to the Architects' Benevolent Society, an important development during the year had been the formation of the Architects' Unemployment Committee. That committee were spending up to the limit of their income and were employing only about one-fourth of those who had applied for and were urgently in need of help. He was fully aware that the present trade depression reflected very considerably upon the incomes of all, and that the present was a somewhat inopportune time to ask for subscriptions, yet there were many who had done good work and made honourable names for themselves who had unfortunately, through no fault of their own, been struck down with illness or scarcity of work, either of which might have fallen on anyone.

A matter which had affected a number of the small property owners during the last few years, and more especially at the present time, was the number of clearance orders instituted by the Sheffield Corporation under the Housing Acts of 1925 and 1930. All agreed that where houses were really unfit for human habitation and were in such a condition that they could not be made fit and in a reasonably habitable condition without undue expense, they should be demolished. The Housing Acts were, however, not very enjoyable reading for property owners in the affected areas, especially the man termed the good landlord who endeavoured to keep his houses in repair, as there appeared to be no discrimination between back-to-back and through types of houses or good and bad repair, so that should a well-kept property be sandwiched between houses in bad condition, the good landlord suffered equally with the bad, the latter, no doubt, in the first place, being responsible for the whole trouble. There was no appeal against the Order. Let the local

authority, said the President, clear those areas by all means "if the property was not fit to live in," but pay the owners "who had kept their houses in decent repair" a fair and just amount of compensation. Unfortunately, the majority of small-class property owners had mortgages on the property, and should they be fortunate enough to hold other property or securities those had to be realised to pay off mortgages on property which no longer existed. Such was the plight in which many of the owners found themselves. It behoved all owners of property in those affected areas to consult an architect or surveyor and obtain his advice as to whether the houses, or at all events some of them, might be retained by preparing a scheme of reconditioning. The method of procedure adopted by the Property Owners' Association was worthy of consideration, viz., to employ an architect or surveyor to prepare a scheme of recondition or reconstruction for the whole area affected, hold a conference of the various firms who had been consulted by their clients, put forward their schemes "if they decided that the property was capable of a recondition scheme," and decide on a general plan. That plan, showing the whole area included in the Order, would carry more weight, and receive more consideration by the Ministry, than separate plans of each property.

Turning to the question of the condition of the building industry, the President said that the cry for economy which had so often appeared during the last twelve months had had a disastrous effect upon the work of the architect and surveyor. The issues were certainly financial if not economic. The danger to prosperity now was the movement in the direction of national economy. Everybody was in favour of the elimination of waste, but we must discriminate between waste and curtailment. In any private business it was most desirable to cut out redundant services and eliminate unnecessary payments. But, in the same private business, it would be the sheerest folly to wipe out plans for expansion and development. In good times or in bad, in prosperity or adversity, it was always desirable to wipe out waste; it was seldom or never good to cut out the means to expansion. The economy campaign did not make that discrimination. Its campaigners plunged forward with an unreasoning fear. They were obsessed with a panic dread of expenditure and did not stop to consider the difference between sound spending and destructive waste; their "economy" was in terms of anything but true economy, of wise spending. Architects and surveyors now felt the first fruits of that disastrous policy. It might well be that truer economy was needed, as it was in architecture itself, but such economy must be planned so that expenditure was remunerative and not wasteful, for there was no worse form of economy than that which forwent the employment of money in schemes of reconstruction, only to have to pay the workmen sixteen per cent. of the cost for doing nothing other than kick their heels in dissatisfaction and distress. The root causes of the depression from which the whole world was suffering could not be removed by anything which architects or architectural organisations could do. But two things we could do. We could, as far as possible, relieve the worst of the distress in the profession by calling upon the generosity of those who were in a position to help. That has been done and would be done by the R.I.B.A. and the Allied Societies. Secondly, we could do our utmost to bring pressure to bear upon the Government, upon the local authorities, and upon public opinion generally, to give more work to the building industry, and every opportunity should be taken by every architect in the country to help that campaign.

The period of depression had coincided with the most momentous development that had ever taken place in the architectural profession. The Registration Act came into force on January 1, 1932. It was easy for the hasty and shortsighted to depreciate the importance of the Act, to point out its weaknesses and omissions, to draft ideal Acts that would give the qualified architect everything that he dreamt of. The short answer to all that was that under existing conditions the Act was the only Act that could possibly have been passed into law. It was for architects to follow with patient perseverance the example of other professions and the example of their own colleagues in the United States and the Dominions until they had secured the same satisfactory position that the latter had done. There were no short cuts available. Unity and perseverance only would give the profession what it wanted.

THE INSTITUTE OF BUILDERS

HALF-YEARLY MEETING.

The half-yearly meeting of the Institute of Builders was held in the offices of its Manchester Branch Committee on Thursday, September 29, when a representative body of members met to discuss the subject of "The Institute and Building Education," and to hear a paper upon "New Zealand Building Conditions." In opening the proceedings, the President, Mr. Thomas Howarth, J.P., drew attention to the Matthews-Macfarlane memorial screen recently erected in the room by the Manchester, Salford and District Building Trades Employers' Association, and paid tribute to the memory of those prominent members of the Institute and of the late Mr. F. L. Dove (past-president). Mr. Walter Thorpe, Chairman of the Manchester Branch Committee, welcomed the members, and spoke appreciatively of the service and energy which the President had brought to the business of the industry and, particularly, to the Institute.

The President surveyed the place of the Institute in the social, economic and political life of the industry. He said he felt that today the industry was in the birth throes of a new epoch. He remarked the diversity of architectural expression; the breakaway from old methods; the functional aims in modern design and modern building; the trend towards standardisation; and the questions which these and other modern movements raised with regard to the future of craftsmanship, the craftsman's place and his apprenticeship requirements.

Mr. R. L. Roberts, M.A. (past-president) said it was sometimes suggested that because of its educational efforts the Institute was properly regarded as an academic body removed from association with or influence upon industrial movement. This was a very curious view: the Institute was so closely interested in education because it was preeminently a body composed of practical people. He discussed for the information of members the progress of the scheme of National Certificates and Diplomas in Building and some of its problems. He asked members throughout the country to assist in the matter by associating themselves wherever possible with School Advisory Committees, and invited the members on those committees to keep in touch with the Institute office with a view to well-informed cooperation in a scheme which could be, and should be, of great practical service to the industry.

The Secretary briefly outlined the history of the Institute in building education. He drew attention to some of the educational problems immediately facing the Institute, to the effect of any major industrial movement upon educational policy, and the constant obligation upon the Institute to exercise a due influence and to be thoroughly informed in the practical politics of the industry.

Mr. W. E. Tyson, F.I.O.B., endorsed the views of Mr. Roberts with regard to the importance of School Advisory Committees and the very useful service members could render in that connection.

Mr. R. Arthur Costain (past-president) emphasised the distinctive character of the Institute and its function in that connection in the realm of building education.

Mr. Reeves Charlesworth, F.I.O.B., discussed the desirability of rigid curricula and systematic marking in building education and examinations, and the position with Education Authorities in these matters.

Mr. J. H. Barker, A.I.O.B., said that no doubt those who had arrived at control of their businesses from the bench brought something to management which the younger generation lacked; but times were changing, and it was of the utmost importance to-day that in building education every encouragement should be given to a close study of building science and to the principles of management.

In closing the discussion, the President drew especial attention to the need for a development of contact between local education authorities and local members of the Institute, and to the desirability of members upon advisory committees keeping in touch with the Institute office for information and guidance.

New Zealand Building Conditions.

Mr. J. W. Graham, F.I.O.B., of Christchurch, New Zealand, then read a paper upon "New Zealand Building Conditions," in the course of which he said it was now perhaps well known that the building industry was the second industry in that Dominion. The average value of building work for the five years 1925-30 was estimated from permits to be ten million pounds. As regards the number of persons engaged and the amount of salaries and wages paid, however, building occupied the first place in the Dominion. The "personal" element still bulked largely in its administration, which explained why the majority of their building operations were carried out by individual or partnership establishments.

The city buildings, public, commercial and industrial, could be compared with those in the Home Country in construction; reinforced concrete was now extensively used for buildings up to four stories in height; buildings exceeding four stories had steel frames. Many were faced with stone, but New Zealand was not well off in high-quality stone, and this was frequently imported. Private dwellings, however, represented approximately one half of the value of the building permits annually. Over three-quarters of those dwellings were of wood construction. Timber suitable for framing and for internal and external work was still plentiful in their natural forests, and was convenient to obtain and transport. Brick, concrete or stone would make more permanent homes, but a wooden house moderately well built required practically no maintenance for a period of thirty to fifty years except painting about every seven years. It was the custom of every wage-earner to purchase his home. As a brick or concrete house cost about 10 per cent. more than a wood house, this frequently decided the materials. Their average bricks, unfortunately, were somewhat porous. The danger of damp in a brick house, and to some extent in a concrete house, made a builder or an architect hesitate to recommend those materials. Only recently had any consideration been given to earthquake damage risk, but now that was recognised and materially affected insurance premiums, the wooden house was likely to retain its popularity.

Perhaps the most striking of the differences in house building practice concerned roof covering. One was struck by the picturesque wood shingles so common in Canada and U.S.A., and by the solid slates and tiles of this country. In New Zealand it was general to use galvanised iron painted to harmonise with the colours of the exterior walls and facings. In the erection of the usual dwellings of four or five rooms, the services of an architect were rarely employed. The majority of those houses were financed, erected and sold by the "speculative" builder, who gave good value. Terraces of houses did not exist.

Blocks of flats occurred only in the four largest cities—and there they were few in number.

The high standards of architecture and practice they believed to be in accordance with those of the Royal Institute of British Architects, with which institution many of their architects were associated. There was a School of Architecture at the Auckland University. The headquarters of the New Zealand Institute of Architects (with branches throughout the Dominion) were at Wellington. Between that Institute and the New Zealand Federated Builders' Association the relations were cordial. Some five years ago relations became strained. The Institute of Architects printed a set of conditions not acceptable to the master builders, but the builders refused to tender except under the registered conditions of contract. Negotiations were opened between the two executives; and under the chairmanship of Sir Frederick Chapman, a judge of the Supreme Court of New Zealand, the conditions of contract were amended and to-day were very similar to those in England.

The right of the architect to specify P.C. sums, and also to nominate and let sub-contracts, was ambiguous and still led to friction in isolated cases, quite apart from the percentage or discount to contractors for supervision in those P.C. sums. It was the general practice to include in the main contract all work, from the demolition of existing buildings to electrical and heating installations, and the painting and decorating.

There had been occasions when P.C. sums were inserted in specifications for sub-contracts, such as for reinforcing. This had led to negotiations for the addition of new clauses to the conditions of contract on the lines of those in the Australian Commonwealth Conditions of Contract. Those not only limited the items for which P.C. sums could be specified, but also standardised the discounts to be allowed to contractors for their supervision—viz., 10 per cent. on the cost of such items as ironmongery and goods which the contractor had to fix, maintain and be responsible for, and a lower discount on those items—principally for larger mechanical work such as lifts, heating or electrical installations—for which (if the architect decided to let separately) the contractor should provide reasonable assistance for carrying out, but was not responsible. The method of having sub-contract work designed and carried out by proprietary companies had now practically ceased. Reputable architects invariably engaged professional advice when necessary, and had drawings and specifications prepared enabling contractors to submit competitive tenders for as much as possible of a structure.

The Conditions of Contract were first standardised in 1905 and amended in 1928. An essential clause provided for settlement of a dispute by a referee and two arbitrators appointed by two selectors, each selector being nominated by the organisations of which the architect and builder were members. The alternative method of settlement was by a sole umpire. The conditions had been so well drafted that an arbitration could be carried out without legal assistance and its decision upheld by the Supreme Court of New Zealand. Appeal to arbitration could be made upon practically all matters, but work could not be stopped because of a dispute. A typical example of the protection afforded to the owner was the clause which stated that "the owner shall appoint the clerk of works under the hand of the architect," and it was also provided that, should the contractor object to the person so appointed, it should be referred to the presidents of the local branches of the Institute of Architects' and Builders' Association for their decision.

Payments to the contractor could be applied for monthly and were made at 75 per cent. of the architect's estimate of the value of the work done. Should the money not be paid within fourteen days of the date of the certificate, interest could be claimed at 25 per cent. This particular clause and penal rate were given by Sir Frederick Chapman, who agreed with the builders' representation.

The practice of the employment of a quantity surveyor varied. Opinion as to adopting a quantity system was evenly divided. The largest buildings had been in the North Island. There competent quantity surveyors were in practice, and contracts were occasionally let on quantities prepared on the Scottish system. In Christchurch quantities had never been supplied. In Dunedin, the next city, a system which was unique had given satisfaction for quite twenty years. The quantity surveyor was employed by the local builders' association, his figures guaranteed to 2 per cent., and his fees were paid by the builder whose tender was accepted. The Dunedin builders had an agreement not to tender for building over £3,000 without those quantities.

The system of compulsory arbitration in labour disputes had been an important factor in the economic life of the Dominion for nearly forty years. Generally speaking, the benefits of the system outweighed its defects, and to the building industry it had given industrial peace and an absence of class warfare. The membership of the unions, helped by the preference clauses in most awards, had steadily increased. The workers in the building industry had maintained cordial relations with the employers. The Court had divided workers into three classes—skilled, semi-skilled and unskilled—and fixed minimum rates of pay accordingly. In the three years 1921-24, wages were dropped by the Court only 2d. per hour. There were few countries in the world where labour had come through with such light adjustments. Wages were based by the Court on the cost of living, and this year the Court made a general order reducing all rates by a further 10 per cent. Until comparatively recent years, prices had been rising, employment plentiful and the fixed rates were the minima. The Act had been administered with impartiality, ability and tact. The machinery of the Court, however, provided easy means of creating what it called a dispute, or, in other words, it allowed either party to an award to demand some amendment to an award. This had resulted in the workers obtaining conditions which, in the present strenuous times, the employers found harassing, and in some cases retarding, to business. In May this year the law was altered, and now they had compulsory conciliation and voluntary arbitration.

Subsequent to the Hawkes Bay earthquake disaster in February, 1931, the New Zealand Government set up a committee of fourteen, which included two architects and two builders, to prepare a report with a view to improving the standard of building construction in the Dominion in relation to earthquake resistance. In the past, each municipality had its own set of building by-laws, many quite out of date. The committee prepared many recommendations to be included in a Uniform Building Code. In its report, grateful acknowledgment was made to the Building Research Station, Watford. Information was sought and received from places such as California, Italy and Japan, where the problem of earthquake-proof construction was being wrestled with. The importance of careful design was being emphasised. Much of the loss had been due to faults in design and construction. This could be avoided by more science and less materials, which often only added weight and became a wrecking force. Designers, in future, would be expected to possess the special knowledge required for designing buildings economically to withstand earthquake forces.

The supervision of building operations had been the subject of extensive propaganda since the 1931 earthquake. Legislation had been proposed giving the local authority the power to appoint a clerk of works on the erection of any structure, and a further Bill was submitted to Parliament providing for the compulsory appointment of a clerk of works on any brick building (other than a dwelling) costing over one thousand pounds. Fortunately, both Bills were not proceeded with. It was pleasing to know that the Government recognised that the advice of master builders was advantageous when matters essentially practical in nature arose.

Any statements on New Zealand to-day should make some reference to the depression through which they had been passing. The New Zealand Finance Minister had said that the nation's income fell from £150,000,000 to £110,000,000 in two years. But the depression would not last for ever, and when it had lifted there would be a vast amount of work for those engaged in the building industry.

Within the building industry it was generally recognised that a house-cleaning was necessary and that the irresponsibles who in times past had cast a shadow over contracting, must be eliminated. One irresponsible contractor did more harm through a single operation than could be rectified through years of honourable dealing by contractors of integrity. The irresponsible contractor's very existence and ability to exist so long came about through the easy times of the past years when money was plentiful and credits correspondingly easy, but those builders the Institute had honoured by admission to its fellowship must work along quietly to raise the standard in their Dominion as the time appeared to them to be opportune.

When the lecturer had dealt with questions with regard to the rates for fire insurance; variations between by-laws; the extent to which compulsory awards proved binding; Mr. B. C. Aldous, Senior Vice-President, on behalf of the members, thanked the lecturer very sincerely for his interesting paper.

After a brief interval, in which the members were introduced to the charming grounds in which the offices stand, the members of the Branch Committee entertained the party to tea.

BOOK REVIEWS

Life and Money. By EIMAR O'DUFFY. London: Putnam. Price 5s. net.

Many books have been published recently on the "cause and cure" of the present world-wide industrial depression, but we have encountered nothing more provocative and stimulating than the book under notice. The author maintains, in effect, that there can be no conventional cure for unemployment, which, he asserts, owing to the increasing use of machinery for industrial purposes, is bound to become progressively worse. He argues that since, with the aid of machinery constantly improving in efficiency, greater and greater quantities of goods must be produced by fewer and fewer workers, the world must accustom itself to the idea of a permanent condition of unemployment for a large part of its population.

The aim of governments and industry, he argues, should be not the provision of "work," but the production of consumable goods in abundant quantity by the fewest possible workers, so as to provide the maximum amount of leisure for all.

With his diagnosis of the industrial disease few, probably, will disagree; his suggested cure—the creation of social credit and the distribution of national dividends to everybody—involving, as it would, fundamental changes in currency production and distribution and banking methods, is not likely to appeal to everybody, least of all to orthodox economists. The book, however, is a brilliant and constructive piece of writing, and it can be recommended to the study of all who are interested in the economic problems of our time.

Foundations of Gas and Oil Engines. By E. L. PARRY. (Chas. Griffin & Co., Ltd. London.)

This small volume will be found useful by the architect or builder called upon to deal with the preparation of foundations for the type of engines mentioned and any other machinery. The author is to be congratulated on the manner in which he has managed to condense so much valuable practical information on his subject into such little space. The text is clear, free from the use of too many technical terms, and with the aid of a great number of clearly drawn diagrams imparts the necessary information in a way that may be understood without fatigue. Our readers will find it a valuable addition to their bookshelves.

EXCAVATION IN LONDON CLAY BY BLASTING

Sooner or later in the course of his life every London architect and builder comes "up against" the London blue clay. Resilient, firm and tenacious, the "London blue," lying impassive forty odd feet or more below ground level, comes as a godsend to the structural engineer as providing good earth for his stanchion footings. To the excavator, however, the appeal is not so strong, for the tenacity of the clay, especially when being dug in confined areas, becomes a tremendous handicap to rapid working.

Architects, builders and excavators should therefore be interested in a method that has been employed (it is believed for the first time in London) at the new extension to Messrs. Selfridge and Company's building in Oxford-street, W. When the steelwork for this new structure had been erected, it was decided to make a further floor under the sub-basement, which meant excavating the clay down to the level of the big concrete footings for the main stanchions. This work was being done by pick and shovel when Mr. Gordon Selfridge, in inspecting the progress of the work, suggested the use of explosive to expedite proceedings. A scheme of operation was planned by the resident chemist in connection with the works manager of the firm, and the experiment, which is described fully hereafter, was attended by complete success, the effect of the gelignite (the explosive selected) being so localised that the seismograph which is installed in the main Selfridge building recorded no earth tremors. Nor were the concrete footings affected in any way. While the experiment as carried out at this building has been remarkably successful, it will be clear that the effect of explosive in various types of sub-soil will differ considerably, and that therefore full experiment into the best means of attacking the varying soils has yet to be made before any uniform code of practice can be laid down. Even then we believe that such work will best be done under the guidance of specialists, when risk to life and property can be reduced to a point approximating to infinity. Police permission to use explosive has, of course, to be obtained.

We append the report on the operations prepared by Mr. J. G. Williams, B.Sc.(Lond.), A.I.C., chief of the Analytical and Testing Laboratory of Messrs. Selfridge and Co., Ltd.

The original Selfridge extension had a basement and sub-basement. The concrete footings, about 14 ft. square and 4 ft. thick, were sunk about 12 ft. below the sub-basement level. After the steelwork was erected Mr. Gordon Selfridge decided that it was worth while to secure the extra floor space obtainable by making a sub-sub-basement. This involved the removal of the clay between the square wells sunk for the footings. This excavation was conducted by under-cutting the clay, using picks, and then loosening the overhanging clay by driving in wedges from above. The shale-like clay (containing, as analysis showed, 28 per cent. of water) was exceedingly hard to excavate. The output of a gang of 12 men was only about 240 cubic yards per day.

For this reason Mr. Selfridge suggested that explosives might be used to remove the clay, and without risk to the concrete footings.

The problem was put to me and discussed by me with Mr. Sharp, the manager of the construction. After discussion with the expert of Nobel's Explosives Co., Ltd., it was decided to try out small charges of gelignite, and this has proved most successful. The clay is sufficiently plastic to absorb very rapidly the shock transmitted from the explosion, as is shown by the fact that a two-inch auger hole in the clay, distant five feet from the explosion of half a pound of gelignite, is not deformed at all by the explosion wave. But where a clay face is braced by wood supports against a concrete wall, a small charge of explosive may transmit an impulse through the wood, if the charge is nearer than three feet to the wood. The charge must not have too great a load of clay to lift or the effect is merely to blow a large cavity in the clay. The lifting and breaking of the clay occurs only to the free edges; there is no shattering of the clay under the charge as it is too plastic.

The clay face is 10 ft. high, and the technique has, therefore, been as follows. A hole is bored 3 ft. into the clay, using a two-inch wood auger. This hole is not more than 3 ft. from the top of the clay. The explosive used is Arctic gelignite No. 2, which is received packed in ten cartridges to the pound. The charge used in this bore-hole is two or three cartridges, followed by 18 in. of clay tamping. Two other charges are placed, one 2 ft. 6 in. below the first, and using three or four cartridges, and the next at the bottom of the clay wall and using four cartridges. The charges are fired, using Bickford time fuse, in the order 1-2-3. The fuse burns at 2 ft. per minute, so after one and a half minutes the first explosion occurs. The clay top lifts slightly (say about a foot), and settles down well cracked up. The second charge detonates about ten or fifteen seconds later, and the third follows after a like lapse of time. There is no throwing of the clay, and it would be quite safe to stand 6 ft. from the clay being blasted. The operatives actually retire about 25-30 ft. away.

With proper handling explosives are safe enough. The only risk is in case of a misfire (a rare occurrence), when a charge fitted with detonator would either be in the clay face or in the débris. In the first case, the normal procedure is to bore in and place another small charge about four inches away, and this will explode the main charge. This is all right if done correctly—but a miscalculation in boring may mean that the auger will penetrate the original charge with risk of unpleasant consequences. In the second case, the débris would have to be searched carefully to discover the unexploded cartridge.

To obviate this risk double firing has been used, *i.e.*, two fuses and two detonators to each charge. If the risk of misfire in one charge is, say, one per thousand, this reduces the risk to one per million. Bickford time fuse is ignited by holding the head of a safety match against the end of the fuse and then rubbing the match-head with the striking surface of the box. The intense combustion of the match composition lights the gunpowder train in the fuse. An ordinary flame does not easily and quickly light the train. This procedure takes time, and between the igniting of the first and the third of single-fused charges, a period of 20-30 seconds may elapse. This meant that lighting six fuses in the three charges was rather an over-long operation. A means was therefore devised to speed up this operation. The two fuses were tied together and a strip of tinfoil is wrapped round the end forming a chamber. In this are placed two match-heads in contact with the fuse ends and one between and standing up slightly. This match-head ignited the other ends which in turn fired the fuses. This method has proved very successful. In case of any mischance, the operator can quickly pull or cut the two fuses apart and ignite one in the ordinary way. The firing of the charges must be done by using good and dry friction surfaces in the matchbox. This sounds simple and obvious, but it is an important point. Unpleasant delay occurred on one occasion because the operator's hands had become dampened by the clay tamping plugs and so he dampened the matchbox in handling it.

In future excavations of London clay there is no doubt that blasting will play an important part. This clay is not suited for pickaxe loosening or digging out by mechanical excavators: it is well adapted for blasting.

INQUIRY BUREAU

QUESTIONS.

Water Softeners.

Sir,—I am anxious to get some reliable information on "Water Softeners." It has been suggested to me by the representatives of various firms that I would do well and save expense by investing in an apparatus which would convert the hard water of our neighbourhood into soft water. I am told one type is an iron cylinder, say about 9 in. in diameter, with various pipes and taps: all one has to do is to connect the service pipe to the house with one side of the cylinder, the house supply going to the domestic cistern with the other side, put in a given quantity of common salt at regular intervals, and with a manipulation of the taps on the softener, water goes in hard and comes out soft, at a capital expense of, say, £20—but no one can or will tell me what is inside the softener, what is the material which softens the water, how it acts and for how long a period the softening process will go on (with the addition of salt) before it is necessary to incur further capital expense. A clear explanation of the above points will oblige. W. S.

Standardisation of Timber in Specifications.

Sir,—On a contract of £1,600 for an office block, the employers have rejected all timber having the least suspicion of white or blue sap, even in carcassing stuff. Boards have had to be procured and machined clear of any defect whatever. The architect declines to interfere on the ground that his specification covers all the employer asks for. It reads as follows:—

Under "Generally."—Quality.—"The whole of the works are to be executed in a first-class and workmanlike manner, and all materials to be of the best of their respective kinds and to the satisfaction of the architect."

Under "Carpenter and Joiner."—"All timber is to be sound, good, and the best of its respective kinds, and to be thoroughly seasoned, free from sap, large, loose or dead knots and other imperfections, and in single lengths where practicable.

"The fir timber for carpenter's work is to be good, clean sound seconds, Swedish or of equal quality. The deal for joiner's work best quality Swedish or White Sea classification."

Can the contractor be legally asked to carry out the employer's demands under the terms of the specification? H. E. L.

Letting a House: Question of Control.

Sir,—I have a freehold house, let in separate floors since 1918. One tenant occupied the ground floor and basement of six rooms at 29s. 6d. In 1920 he sublet the basement of three rooms at 13s. 6d. On June 8, 1925, he vacated his tenancy and took the keys to my agent, leaving his sub-tenants in the basement. The tenant on the first floor of three rooms, at 19s., moved down to the three rooms on the ground floor, one of which was left open. On June 22 he took the two weeks' rent owing from the basement tenants, who then moved to the first floor which he had vacated. The basement had been vacant two days when he re-let it to new tenants, who paid £5 at my house to my agent's clerk, he paying 10s. himself to obtain the let of the first floor and the vacancy of the basement. Both ground-floor and basement tenants claim they are controlled. What is the position? E. N.

ANSWER.

Rendering Glass Opaque.

[Answer to "N. F. B. C.," October 14.]

Sir,—I have proved by past experiments that the best way to render glass opaque is to clean it well and give it a coat of sugar of lead. Afterwards one can paint or enamel it and it will stand up to fair usage.

S. A. Smedley.

THE BUILDING TRADE

HINTS ON BUILDING PRACTICE—XVII

By J. R. TAYLOR.

PLASTERING AND REPAIRS.

The increasing frequency with which plastering repairs have to be undertaken as the result of causes other than those of fair wear and tear and accident has aroused the attention of those responsible for the maintenance and upkeep of buildings. In the case of older buildings, a good deal of the trouble may reasonably be attributed to the greatly increased amount of vibration to which they are subjected as the result of heavy and speedy road traffic, and many new buildings are similarly affected. But when full allowance has been made for this, cases of falling plaster in new buildings come under notice or are reported with such frequency and from so many places that we are led to look elsewhere for the cause of the trouble.

The plasterer's craft is a very old one, and up to comparatively recent times practically all the materials in everyday use were similar to those used from generation to generation for hundreds of years, and had been found to give satisfactory service when used by instructed and capable men following traditional methods. Therefore, if a case of failure is investigated and vibration and accidental causes can be eliminated, we must look for the defect either in the materials used or the methods employed, or both, and if we find departures from traditional usage such variation must be regarded as at least open to suspicion. For our present purpose we need not consider other materials than sand, lime, hair, plaster laths, and to a limited extent plaster of Paris. We can disregard chemical changes taking place in brickwork by confining ourselves to lathed-and-plastered ceilings and partitions, but we cannot afford to overlook timber movements.

We need not say much about sand, for the average quality as ordinarily used for plastering may be regarded as much the same as ever it was, and though many failures may be rightly put down to the use of unsuitable sand, their frequency is not thereby increased. At the same time, the importance of really clean sand for plastering purposes is great. Lime, until recently, has always been regarded as the one material used for ordinary plastering about which no risks of any sort should be taken. Builders would send for lime from considerable distances, even when ordinary local lime was considered to be quite good enough for building with, so that there should be no doubt as to its behaviour when used for plastering. Thirty years ago many architects specified that putty lime should be run for at least six months before being used in their work, and the good builders did not consider this irksome or unnecessary, for it was just what they would have done if left to use their own discretion, and many still continue the practice. But gradually the architect relaxed in regard to the length of time he specified, and it is now commonly found that the time fixed will be somewhere between two and four weeks. The point that arises is whether this departure from traditional method is or is not one of the causes of the greater frequency of plastering failures. There can be little doubt that the traditional method came into use as the result of trial and error. The early craftsmen did not in the first instance run lime into putty and then deliberately wait six months for it to mature. No doubt they gradually found out that the longer it was left to mature the less the uncertainty as to its behaviour. Nor is it necessary to believe that lime would fail in every instance to give satisfactory results if put into earlier use, for limes vary considerably. What these old craftsmen must have found out by experience was that if a lime could be run into putty it was quite safe to use it after six months, but that there was an element of risk if it were used earlier. It is claimed that these methods have been superseded by the introduction of hydrated lime; but what it all comes to is that in purchasing lime in this form the builder is for practical purposes buying lime that has been slaked, dried and powdered but has not necessarily fully matured. That firms supplying this material do send out lime that usually answers the purpose is not contested; but the testing of materials used in building would seldom be necessary could they invariably be relied upon to give entire satisfaction, and it is better to be safe than sorry. Putty lime six months old is safe if kept clean.

The old specifications laid it down that hair used in plastering should be from bullocks, be long and curly, and be cleaned by beating. There are strong commonsense reasons underlying every word of this description. Taken from bullocks, the hair will come from young beasts bred for the table, and thus likely to be in a healthy condition. Hair loses curl with disease. Length is important, for when the coarse stuff is applied to a ceiling it will depend upon the hair forced through the spaces and turning over in the keys for support. The hair may be properly regarded from the same point of view as metal reinforcement in concrete. The beating up of hair to free it from dirt is done lightly so as not to break the individual hairs; it should be done very thoroughly, and this uses up time. If fallen plastering is closely examined it will often be found that the hair has neither been properly beaten nor evenly distributed. This fault is very common, and those who have to supervise buildings should take precautions and inspect the hair before it is allowed to go into the mortar. If the hair beats out clean and curly, a gripped handful of it will spring into bulkiness again on release and it will be pleasant to handle. It is also very important that it should be thoroughly well dragged in by a labourer of experience, for it is not every labourer who knows how to knock up plasterer's material. Not without probability, it has sometimes been advanced in explanation of an apparent deficiency of hair in fallen plaster that, though sufficient was put in to start with, some of it has disappeared. This has been said to be due to chemicals being used in dressing the hides. Whatever may be said for this theory, it is hardly probable that the hair is not fit for service if it responds to the test of being curly and springy after being cleaned.

For a long time after sawn plastering laths were first imported into this country they were regarded with disfavour and as only suitable for work where considerations of price ruled out the employment of anything better, but in course of time they came to be widely used. If for no better reason than that saw laths offer a greater area of end grain to make contact with the wet mortar than do riven laths, I consider that the latter are to be preferred. It is, however, fair to say that on average work it will require more coarse stuff to cover a given area of riven lathing than sawn lathing, and consequently there is more moisture present when the former is used.

This brings us to the crux of the matter, for if the materials used are free from suspicion and failure still follows, then the cause must be looked for in the methods employed. As already shown, the fault may be in a want of proper preparation of the materials, which in itself would be a failure in method; but in nine cases out of ten the main cause of failure is probably overhaste. No reader having practical experience needs to be told that the percentage of really seasoned timber used in carcassing is very small, and as timber shrinks in drying it is obvious that plastering is subjected to much strain if the movement of the timber is considerable and it takes place after the plastering has set. Using better seasoned timber than is now usual, the old builders considered that after the roof was covered in there should be a pause before plastering was put in hand. The duration of the pause would depend on the amount of wet weather encountered during the time building had been going on; but after the first coat had been applied there would be a further pause until the plastering material had dried out and hardened, and it is here that it becomes important to consider the effect of departure from these methods.

Unquestionably, even when using seasoned timber, movements would take place while the first coat was drying out, and cracking would occur, but be hidden by the subsequent coats; whereas now greater movements are bound to take place and to continue for some time after the work has been completed. The greater movement may be sufficient to shear the keys and the plastering falls, or if not so great yet be sufficient to cause very pronounced and unsightly cracks to appear. When painters wash old ceilings they find them cracked in all directions, but the cracks are fine and easily hidden by distemper. When a builder is called upon to repair plastering and it is obvious that the necessity for repair has not arisen from accidental causes, he should satisfy himself as to the cause. If, for instance, a ceiling is badly cracked, it may be that the floor joists need stiffening up with a row of bridging, or that ceiling joists require to be braced up with hangers in the roof space. If solid bridging has been put in and the shrinkage of the timbers has been considerable, the bridging may be serving little useful purpose. If the trouble arises out of traffic vibration and there is no likelihood of its being lessened, it is of little use patching or even replastering, and some other covering should be applied. Where no great area of plastering has fallen but it is all tending to fall, it is sometimes practicable to put up battens and cover in with a ceiling board or lining without removing the old lath-and-plaster work. It may then serve the same purpose as pugging and thus add to the comfort of the rooms.

If considerable areas of wall plastering have fallen or are loose, the cause should be sought. It may be found in damp, or it may, as has several times been pointed out by the Building Research Station, be due to a chemical action. If the latter is suspected the help of the Station should be sought. When it is obviously a case of admitted damp it is necessary to remember that if it is sought to cure it by applying an impervious rendering to the inside of the walls it must be carried down behind skirtings and through the floor to be safe. In such cases it is advisable to remove the wooden skirtings and the plugs holding them and run new ones, if needed, in Keene's cement. When the cracks in the plastering are due to settlement it is necessary to ascertain whether the building has come to rest before repairs are undertaken. If the cracks extend through cornices it may be very difficult to make a neat repair without taking a considerable length down, for the separated members may no longer be at the same level.

Patching plaster is work requiring experience and skill, for it is not every plasterer who can effect so neat a repair that the outline of his patches will not be seen even if covered with several coats of paint. Owing to the shrinkage that takes place in drying, the patches frequently have surfaces that are either hollow or over bold. For good work the patches should consist of as many coats as the plastering to be matched. The handy man is prone to use too much plaster of Paris when patching, with horrible results.

THE "ONE-PIPE" SYSTEM OF DRAINAGE

SIMPLIFIED METHOD OF PLUMBING.

At a meeting of the Royal Sanitary Institute, held on Tuesday, October 11, at 90, Buckingham Palace Road, an address was given by Mr. W. H. Draper (Sanitary Inspector of Saint Marylebone), on the one-pipe system of drainage, a simplified method of plumbing which it is sought to introduce into this country. Dr. Charles Porter (Medical Officer of Health for Saint Marylebone) presided.

Mr. Draper said the one-pipe system of drainage was an arrangement that permitted the connection of any sanitary fitment to a combined soil and waste pipe. The method was giving complete satisfaction in the United States and Canada, and in this country there was an insistent growing demand for its introduction. One indication of the rapid change of opinion that had taken place here on the subject was the fact that the L.C.C. had within two years of the framing of its existing drainage by-laws seen fit to consider very drastic amendments. Matters had been precipitated by the fact that in the endeavour to deal with the possible nuisance arising from "puff" pipes to waste fittings it had been made incumbent on the builder to provide, whenever necessary, another pipe up a building already "graced" by soil, anti-siphonage, waste and rainwater pipes. This fifth pipe had forced us to ask whether so many were necessary.

Another reason for the introduction of the system was the serious nuisance that arose from the present method of dealing with waste discharges, particularly those from hotels and large blocks of flats. After taking every precaution to shut out the smell of what was at times a foul discharge, this discharge was taken down to an open gully to play havoc with the ground-floor tenants.

We were in the main satisfied with the present requirements for soil and drain. Could we design and construct work as sound with a waste pipe as we did with a soil pipe, and put a trap to the waste fitting that would be a sufficient and reliable barrier to the admission of drain air into an apartment? Admittedly the system would confer little advantage on the small house; but in the case of large buildings, such as hotels and blocks of flats, there was, as compared with what was done now, a reduction in the initial plumbing cost of from 15 to 20 per cent. Further, the system reduced the number of pipes and drain connections, did away with foul gullies, economised space, was more readily installed and lessened the cost of maintenance.

While it simplified a big plumbing installation in a marked degree, it called for a high standard of work. A considerable number of the men who to-day undertook to do plumbing work were ignorant of the first principles of that work, and he was told that it was not possible to incorporate in a set of by-laws the requirement that a plumber should be qualified. But such a qualification was insisted on in the Colonies and America.

The Sanitation, Plumbing and Water Installation Panel of the Advisory Council of the Building Industry were preparing a comprehensive report on the one-pipe system, and the Institute of Plumbers were preparing a minimum specification for plumbing. Both reports were to be laid before the Ministry of Health, and it would be all to the good if the two bodies of experts could meet and compare them before their final submission. Natural laws were the same everywhere, and a minimum specification for plumbing was as sensible as the standardisation of the thread on a pipe.

Turning to objections that have been urged against the system, the lecturer said that it was contended that traps would become unsealed by aspiration, self-siphonage or evaporation, that there would be danger from the diffusion of gas through the water seal of a trap, and that even with good work and material the waste pipe would be a source of danger as it deteriorated with time. The last of these objections was equally applicable to the soilpipe constructed under the present method and was common to everything in the world and, with regard to the other objections, he was confident that our sanitary engineers could design systems that would be proof against all the dangers enumerated.

Three features were necessary to ensure the system's efficiency—good design, suitable material and good craftsmanship—but given these, he was satisfied that its introduction would prove one of the most successful of experiments. Owing to the possible danger from frost closure the pipes should be fixed internally.

Calling attention to a model in the hall, the lecturer said it was an exact replica of the installation in the plumbing space between each pair of bedrooms at a large hotel, the first scientific try-out of the one-pipe system in London. The water-closets connected to the 5-in. stack with 3½ in. branches ventilated with 2 in. anti-siphonage pipes back to the main 4-in. vent. Just below the water-closet connections was a 3-in. double branch taking the 2-in. copper waste pipes from the baths, and fitted with a deep seal trap having a 3½ in. seal. These 2-in. pipes were ventilated full bore back to the main vent. The 1¼ in. lavatory basin wastes discharged into the bath wastes and a continuous vent was obtained through the horizontal connection from the P-trap having a 3-in. seal. Had the work been carried out in the usual manner there would have been additional stacks of waste and vent, and, with baths and lavatory basins on both sides of the plumbing space, much longer lengths of branch waste and vent.

Of course, the system must be gastight, and adequate ventilation was imperative. To ensure the efficient working of the system regard must be had to the position, number and expected use of the fixtures when computing the relative sizes of waste and vent. It would not suffice to take branch vents from points because these were convenient, but the system must be so designed as to encourage and ensure the free flow of air through the pipes with vents always working to their full capacity.

The problem of ventilation was very complicated. The three effects that had to be provided against were self-siphonage of the local branch, back pressure through increase above atmospheric pressure in the stack, and partial vacuum in the stack causing siphonage. Stated in general terms, the size of the main vent would be governed by the diameter of the soil pipe, the maximum flow to be expected and the length of the soil and vent. Traps and vents were interdependent, and the depth of the seal of traps would, no doubt, receive very careful consideration. Limited to a two-gallon flush to a water-closet, a 1¾ in. seal was the maximum depth that could be allowed if the flush was to be efficient. The depth of seal to the trap of a lavatory basin, sink, etc., should be greater because it required a much stronger influence to produce siphonage of a column of water 4 in. in diameter than was the case with a smaller trap. Experience and experiment would give the right figure. A trap might be subjected to a sudden strain through simultaneous discharges from various fittings and a margin of safety was necessary. The retaining of a full seal to a trap at all times was an object to be aimed at. There were bound to be divergent views as to what was a suitable depth of seal to a lavatory basin or sink, but the fact that our present by-laws permitted under certain conditions a ¾-in. seal to a waste pipe was indefensible.

The question of evaporation had been raised, but experiment had convinced him that this danger was almost negligible. With proper ventilation, little gas would be present in the system in a concentrated form and with a deeper seal less would pass through. A more likely source of nuisance was from the fouled surface between the fitting and the water seal: the latter should be as close as possible to the fitting. Branch wastes and vents should receive more attention than had been given them in the past. All vent connections should be designed where possible to prevent the water rising up the vent.

Dealing with materials, the lecturer said the choice of these should be carefully considered, because they would be taking both hot and cold water. It was probable that cast iron would be the metal chosen for the main soil pipe, and a short lead branch taking an S-trap of a water closet would be found very convenient to take the bath and lavatory basin waste. More use might well be made of copper for the branch wastes, lead being more liable to puncture and subject to the effects of expansion and contraction. Copper, like lead, had a smooth bore and was very neat; and with architects striving for concealed wastes and supplies it was desirable that a material that was not easily accessible should have some relation to the life of the building. But there was a definite place for lead in the system, particularly for vent pipes. The galvanised wrought iron largely used in America was not an ideal material, either for waste or vent. Corrosive gases worked more quickly through an unwashed vent pipe. When constructed in galvanised iron, this and the portion of the stack above the top plumbing fixture was always the first to go. There would be thin places in the coating where corrosion would take place earlier, and where the pipe was cut the coating at its end was more or less damaged, so that the iron was left bare and corrosion was set up. The pipe had not always got a smooth bore, and there might be disastrous results if the journeyman failed to ream out its ends after cutting. A system of soil pipe largely used in North America consisted of galvanised wrought-iron threaded pipe with cast-iron recessed threaded fittings. This was giving satisfaction.

As to what would be an adequate test for the system above ground, the lecturer said he did not think our present method of testing by means of a U-tube holding up to the depth of the shortest seal sufficient. He would suggest a pressure in the region of five pounds to the square inch.

He thought "simplified plumbing" an apt description of the one-pipe system of drainage, the only problem to his mind being to decide the depth of the trap to the fixture. A competent sanitary engineer would make light of the other difficulties. With regard to by-laws, it was difficult to foresee every possible contingency when these were framed. Therefore, they should be periodically reviewed and amendments as found necessary should be incorporated. At the present stage, there were three additions that might be considered. The first of these was that when an alteration to existing good work was of a slight nature, it could, with the assent of the local sanitary authority, be carried out on the existing lines. The second addition to be considered was a "permissive" clause to allow an open gully inside premises wherever necessary. One could not have some buildings without it—a fishmonger's shop, for example. The third matter was that the by-laws provided that no pipe, trap, etc., should be marked with the letters L.C.C. unless it was in conformity with the requirements. The only fittings that he saw stamped with these letters were pipes, bends, etc. Manufacturers of fittings such as traps, anti-siphon and otherwise, should be entitled to have these tested at their own expense and officially declared to be in conformity or otherwise with L.C.C. requirements.

A discussion followed, in which architects, sanitary inspectors, medical men, and others took part. Many interesting points were raised, such as the suitability of the system to various classes of property, the necessity of a scientific lay-out, if it were adopted, and the skill required of the workman. In this connection the point was several times made that plumbers should be registered in this country, as they were in the Colonies and in the United States.

THE BUILDING RESEARCH STATION

QUESTIONS AND ANSWERS.

THE following abstracts of inquiries* represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.

Cleaning Cement Renderings.

The façade of a large building rendered in Portland cement had to be repaired. When the work was finished the façade had a patchy appearance, and the contractor wished to know the best means of bringing the rendering to a uniform colour.

Reply.—From the experience of firms doing work of this nature it is understood that Portland cement stucco is very difficult to deal with. The usual procedure adopted is to have the whole façade thoroughly wire-brushed and then to apply two coats of cement slurry. This procedure has been tried with considerable success in the Midlands. The use of chemicals for cleaning such work cannot be recommended owing to the possibility of ultimate deleterious effects on the stucco.

Corrosion of Copper in Diatomaceous Earth Concrete.

A consulting engineer, in an endeavour to keep down weight in a hollow floor by the use of a diatomaceous earth aggregate, was concerned as to the possibility of the corrosion of copper tubing laid in such a concrete.

Reply.—Specimens of material similar to that proposed have been analysed and the quantity of soluble salts present is not considered to be sufficient to have any injurious effect upon metals embedded in it. The generally high absorption of diatomaceous earth products may result in a rather larger amount of water being taken up during construction work than would be the case with other types of filling, and there is a possibility that corrosive solutions, such as magnesium chloride, might be absorbed and so brought into contact with the tubing. Provided such rather remote contingencies are guarded against, it is not likely that any harm will result from the use of such an aggregate in a dry suspended floor.

Cracks in Plastered Ceilings.

An architect desired the advice of the Building Research Station on cases of serious cracking in plastered ceilings. The specification of the plaster read as follows :—" Plaster to be Sirapite plaster obtained direct from the makers and used according to their instructions. All work to be two-coat work. Sand to be clean, gritty, medium fine sand. The setting coat to be run with a small proportion of lime putty." When the house was finished the whole of the plaster in the three principal reception rooms cracked into squares about 15 in. across with amazing regularity. The setting coat was replaced, but the new plaster cracked just as badly. In a second instance a setting coat was applied on the day following a test of the heating system in a new house. This coat failed in precisely the same manner.

Reply.—Regular cracking of the kind described is most likely due to contraction on drying out. This is particularly the case with lime putty which has a large contraction, and only develops very low immediate strength to resist shrinkage stresses. On account of this it has become common practice to gauge all finishing coats with a quick setting plaster, which will develop high strengths in a short time, and thus counteract any shrinkage movement in the lime putty. Fresh Sirapite generally contains sufficient plaster of the quick-setting type to impart a sufficient preliminary strength to reduce the shrinkage of the lime putty. If properly handled, therefore, it will serve the same purpose as gauging a lime putty with plaster of Paris. Many operatives, however, are under the impression that Sirapite can be "knocked up" almost indefinitely without injury to its strength. When used in sanded undercoats it is undoubtedly necessary to kill some of the early set in order to handle it at all, but we understand that the makers deprecate the working of it after 15 minutes from the time of gauging with water. It is evident that this time would be easily exceeded when mixed with lime putty for finishing coats. In this case the efficiency of the early setting powers of the plaster would be reduced and allow the lime putty to shrink. The shrinkage would be more pronounced when thin finishing coats are applied over surfaces with high suction. The fact that the heating installation in one instance was put into working order before the application of the finishing coat would certainly tend to increase the suction of the first coat, and unless this suction had been properly adjusted by thorough damping down shrinkage cracks in the finishing coat would be almost inevitable. It is recognised that, where time permits, undercoats should be allowed to dry out and finish cracking before the subsequent coat is applied, but here again great care has to be taken thoroughly to adjust the suction before proceeding with the finishing coat.

The difficulty of handling Sirapite within its effective setting time can be minimised by using hydrated lime in place of lime putty. This allows the mixing of the Sirapite and lime in a dry condition, and only necessitates their gauging with water immediately before application. The dry hydrate should, however, be purchased under a written guarantee of soundness in accordance with the "B.R.S. steamed pat test." A qualitative chemical analysis of the specimen submitted indicated a large proportion of calcium sulphate, which is in accordance with the specification for Sirapite plaster, and a small proportion of lime, which gave a strong alkaline reaction with some carbonation. The plaster was, however, in a very weak and friable state for one which is essentially a Sirapite plaster. It would appear that the plaster was in accordance with the specification, but its weak and friable state suggests that the set of the Sirapite had been killed before its application to the ceiling.

Floor for Cooked Meat Factory.

An architect required assistance in selecting a suitable non-slip flooring for a cooked food factory in which it would be exposed to the effects of hot brine and fat, and to a considerable amount of heavy traffic.

Reply.—The flooring in such a factory is subjected to the severest conditions, and the requirement of a non-slip surface appears to add to the difficulty of the problem.

There are three alternatives capable of giving satisfactory results :—

(1) A granolithic floor, consisting of high alumina cement and granite aggregate.

(2) Hard ceramic ware, such as paving bricks or good quality flooring tiles.

(3) Wood block flooring, laid in bitumen in the normal manner. This, of course, would not be suitable for exposure to brine.

The first method offers advantages both from the point of view of cheapness and hard wearing, and it could be laid with an indented surface so as to prevent slipping. Failure of the adhesion of granolithic finishes to a concrete base is not unusual, and in order to avoid troubles of this kind precautions should be taken on the lines indicated in Building Research Bulletin No. 9 (H.M. Stationery Office, price 3d. net). This is particularly important where a high alumina cement finish is applied to a Portland cement concrete base. A certain amount of shrinkage movement is likely to be experienced under such severe conditions, but this could perhaps be eliminated by having the floor laid in squares of limited area, say, 6 ft. by 6 ft., surrounded by a joint of asphalt. This joint would allow for any movement which might take place. A difficulty likely to occur with the use of high alumina cement is dusting on the surface, but this would be considerably reduced by careful handling and by keeping the concrete damp by means of wet cloths, etc., for a period of 8 hours, and then in a saturated condition for a further period of 24 hours to ensure proper curing. A slight amount of dusting would not have any injurious effect on the surface. The use of clay tiles or paving bricks would provide the hard-wearing surface, but there is some doubt as to their non-slip properties and the durability of the jointing material which, if normal Portland cement be used, may be attacked by the fats. Hard-wearing flooring tiles bedded in bitumen in a similar manner to wood block flooring have been found to give satisfactory results in experimental floors at the Building Research Station. Alternatively, there seems to be no reason why high alumina cement mortar should not be used as a jointing material if a tiled floor is preferred.

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BRITISH INDUSTRIES FAIR

WE have received from an official of a Manchester business firm, who do not wish their name to be disclosed, the following communication on the subject of the British Industries Fair :—

"If the experience of my own firm is any criterion, the rush for space at next February's British Industries Fair, to which the Press are drawing attention, is the most hopeful trade portent of recent weeks. When we first commenced showing at the B.I.F. years ago, we were employing somewhere in the neighbourhood of 100 employees; to-day we employ well over 1,000, which I consider is largely due to the help received from this annual event. It has increased our turnover more than six times, and each year has been a decided increase over the last. Before we exhibited at the Fair, we did not do any export trade worth considering, and now our export represents nearly 30 per cent. of our total turnover, the bulk of introductions having come through the good auspices of the Fair

"The increase in the Fair over all Continental rivals has been extraordinary, and I do feel that it reflects great credit on all concerned that in such a short space of time the British Industries Fair should occupy the position of the world's premier national fair which undoubtedly it does to-day. We, here, bring out our lines to have them ready for this season, and it enables us to take out quantity orders for the coming Christmas in the early part of this year, and then bring down our production costs to a minimum through the many advantages of mass production. This undoubtedly has been a very great feature towards the success of this and many other businesses I know.

"A very big factor in the success of the Fair has undoubtedly been the great interest which the Royal Family have taken in it, manufacturers having been stimulated to put forth their best in the hope of their 'lines' coming under the notice of any of the Royal Family who should happen to visit the Fair; the export market especially has been greatly encouraged through these visits.

"I feel I cannot close this letter without voicing a very great regret on the part of the majority of the exhibitors, and that is that the Government have withdrawn the subsidy in connection with advertising this year. Advertising, we are told, is the soul of business, and still the Government do not feel inclined to grant £25,000 to encourage British manufacturers"

TRADES TRAINING SCHOOLS

The distribution of prizes to students of the Trades Training Schools was made by Lady Riddell, at the Carpenters' Hall, E.C., on Monday evening last, when an address was given by Lord Riddell. Mr. J. Roy Lancaster, Master of the Carpenters' Company, occupied the chair, and among those present were the following :—Sir Raymond Unwin, Sir John Stavridi, Sir Percy Shepherd, Sir Stanford London, and Messrs. E. Guy Dawber, A.R.A., F. Adams Smith, Frederick Sutton, W. J. Hepden, W. J. Minn, Herbert C. Preston, H. D. Searles-Wood, Councillor C. Barnes, W. T. Plume, A. Blackborow, Alfred Roberts, G. D. Minn, Charles L. Hartwell, R.A., Walter Tapper, A.R.A., Louis Jacob, Maurice E. Webb, Francis O. Keysell, Harvey Hull, George Parlby, Arthur Bedford, Herbert Chappell, F. Montague Smith, Rev. C. B. Bartlett, Leonard Wells, E. F. Dickins, Alexander Howard, H. Westbury Preston, Lt.-Col. A. C. Preston, and the Clerk to the Company, J. Hutton Freeman.

Mr. F. Adams Smith, F.R.I.B.A., Chairman of the Schools Committee, in the course of his annual report, said the schools reopened for the present session on the 19th of last month, and the number of students enrolled on that evening was 132; the number now on the books was more than 339. The maintenance of the number of students who attended those classes was very encouraging, and in visiting the schools from time to time one was struck by the interest and enthusiasm of the students. We were still facing the serious position of unemployment and this had affected the attendance at the evening classes of all institutions. Students came from considerable distances, which meant expense. He was glad to find that the Trades Training Schools had suffered comparatively little as regards attendances. Past benefactors had provided a valuable number of prizes which were competed for during the session, and these, together with the certificates, were to be presented that night. It had been his pleasure to sign at least 150 of those certificates, which gave some idea of the work accomplished. The Trades Training Schools were a unique institution, carried on in great measure by the Carpenters' Company, who were associated with some five or six other City Companies and the entire institution was carried on independently of any outside help. He must express, on behalf of the Carpenters' and the associated Companies, the appreciation and gratitude which they owed to their director, Sir Banister Fletcher, who displayed remarkable personal interest in the schools. He regretted to have to record the death of Mr. James Harris Browne, past master, who was for a long period associated as a member of the Schools Committee. He also regretted to announce the death of Mr. John Rees, instructor in the handrailers' and stair-building class. A visit to the schools, continued the speaker, any evening would enable one to learn why the students were so successful. The students worked in the real atmosphere of their respective crafts and went about the job with a swing and really discovered the joy of work.

In the absence of Sir Banister Fletcher, owing to domestic bereavement, his annual report on the work of the session 1931-32 was read by the clerk, Mr. J. Hutton Freeman. The report stated that the work at the Trades Training Schools during the session 1931-32 was very successful, and some of the classes had applicants on waiting lists. The attendances for the session reached a total of 13,852, giving an average of 92.96 students per evening, which was very satisfactory in view of the prevailing conditions. The judging of the work of the students took place on May 11 last, and the judges were well satisfied with the general excellence of the exhibits. The success of the school, continued the speaker, depended almost entirely on the instructors, who were not only the friends of the students, but aimed at efficiency of the highest order, thus fitting craftsmen for the best positions in the various trades. The Trades Training School was founded thirty-nine years ago by the Carpenters' Company, and so at the end of this session they would have completed forty years. The Company has throughout this period devoted a large part of its income to training student-craftsmen actually engaged in the building industry, and for this financial support the rising generation of craftsmen owed a great debt of gratitude. Associated with the Carpenters' Company in the enterprise, other City Companies had from time to time joined in, and thus in the school was seen the unique spectacle of those great building guilds teaching their crafts, just as they all worked together on a building in course of erection. He would like to give a word of advice to new students. In the first place, it was most essential that they should be regular in attendance; otherwise, it was far better not to join the classes, because they had waiting lists of students who were anxious to enter the school. Their future success in life depended entirely on their own efforts to acquire knowledge and skill in their craft before responsibilities crowded out leisure, so he would exhort them to supplement their daily work by regular attendance in the school, where was offered the chance to gain a thorough knowledge of and skill in their craft, so that they would be able to carry on through the years to come, satisfactorily both to themselves and to the community. In the second place, he would urge upon them to form as soon as possible the habit of concentrating upon the matter in hand, and be thorough. The instruction given in the school aimed at securing a solid foundation of craftsmanship, and they were assured that they did not fail in their purpose, for repeatedly they had had letters from all parts of the British Empire from past students, many of whom had attained to leading positions in their particular crafts. Those letters recorded their indebtedness to the school for the knowledge and skill acquired therein, which had been the basis of their subsequent success. The Building Trades Exhibition held at Olympia in September last showed exhibits of the good work carried out by the Carpenters' Company at the school, thus indicating that it was work of a practical character, displaying good craftsmanship, which was their great aim. A prize was awarded for the setting out of their stand and their exhibits generally were highly commended. We had been passing through, and still were experiencing, a great depression in trade generally, and consequently the building trades were hard hit, with the result that there was a great deal of unemployment. In these critical times, therefore, many craftsmen found it difficult to pay their fares to and from the school, but they would be well advised in their own interests to make every effort to do so, always bearing in mind that they would thereby be in a position to take full advantage of the time of prosperity to which we all anxiously looked forward, and would be able to look back with satisfaction to the time spent at the Trades Training Schools.

Lady Riddell having distributed the prizes, Lord Riddell addressed the meeting. He said that if anyone felt gloomy about the outlook he should pay a visit to the Trades Training Schools, where he would get a wonderful tonic. There he would find nothing but brightness and the energy of industrious young men. He (the speaker) had given away the prizes at and visited many technical schools, but he had never been to a better one than the Trades Training Schools. There was, he continued, a misapprehension about technical education in this country. We were supposed to be behind other countries in that respect, but, as a matter of fact, there were 93,643 students working in day schools and 929,773 in night schools. It was a very fine thing in these days, when we were supposed to be so decadent, that there should be such a great body of young men, keen and energetic, and anxious to make the best of life. We lived in a world of change, but there was no change in the things which made for success in citizenship. The things that the Greeks, the Romans and the Jews required were the things which were wanted to-day. The speaker then enumerated in the form of a running commentary, that was full of wit and worldly wisdom, the qualities which he considered necessary for success in life. These, he said, were as follows : Energy, self-reliance, honesty, initiative, continuity and perseverance, courage, patience, optimism, geniality, the ability to take a joke against oneself, tact, good judgment, and the avoidance of doing silly things. The business vices he described as vanity, self-pity, rashness, slackness, rigidity, arrogance and unpunctuality. Concluding, the speaker said he was struck by the improvement that the students showed over those he knew when he was a boy.

Sir Stanford London, proposing a vote of thanks to Lord Riddell, said he thought a good deal of money was wasted by the Board of Education. With proper direction ten millions a year could be saved to the country. What was the use of so-called instruction to boys and girls who were unable to take advantage of it? What was wanted was proper selection, and that was where the Trades Training Schools were co-operating and achieving such wonderful results.

Sir Percy Shepherd seconded the motion, which was carried with acclamation.

Lord Riddell, in reply, said he disagreed with Sir Stanford London on the question of education. We already had "selection." The Hadow Report laid it down that from "eleven plus" the children should be graded according to their qualities. No money was better spent than on education. We had got to train the young to get the best from themselves. There was a real pleasure in doing work well. Payment for work done, of course, was an important thing : we had all got to live; but good work well done gave real satisfaction.

Mr. Herbert Chappell proposed a vote of thanks to Mr. J. Roy Lancaster for presiding, and this was seconded by Mr. W. J. Hepden, and carried with acclamation.

Mr. Lancaster briefly replied, and the meeting terminated.

Unemployment Charts.

In our issue for September 23 we published two charts relating to unemployment in the building industry—one prepared by Mr. Sydney Tatchell, V.-P.R.I.B.A., and the other by the National Federation of Building Trades Operatives. Considerable interest has been shown in these Charts, and we shall be pleased to supply copies of them to any reader who may care to apply to us.

Scheme for Working-class Houses.

It is stated that a public utility company, the Economic Housing Association, Ltd., has been registered under the Benevolent Societies Act as a non-profit organisation for the erection of 100,000 houses in all parts of the country at a rental of 8s. per week and rates. Major C. R. Attlee and Dr. C. Addison are connected with the scheme.

Early Wallpaper at Oxford.

Some curious examples of early wallpaper, believed to belong to about the year 1760, have been discovered, according to *The Times*, in the course of alterations to the room at St. Edmund Hall which Thomas Hearne, the antiquary, occupied during a great part of his life. The pieces now revealed, which are nearly contemporary with Hearne's occupancy of the room, are of heavy paper stamped with a flowered pattern over a trellis of dotted lines; the paper shows the nailmarks where the strips were nailed together on the wall.

NEW BUILDINGS IN LONDON

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Wednesday morning.*

Barnes. — CHURCH. — Messrs. Arthur Brocklehurst and Co., F.R.I.B.A., Martin's Bank-buildings, 10, Norfolk-street, Manchester, are preparing plans for erection of a Methodist church on Station-road, Barnes, S.W. Contracts have not yet been let.

Bow. — PREMISES. — The L.C.C. approve the application of the Considère Constructions, Ltd., on behalf of Messrs. Kemball, Bishop and Co., Ltd., in connection with the erection of a building at the premises of Messrs. Kemball, Bishop and Co., Three Mill-lane, Bow.

Camberwell. — CLUB. — The Rev. J. H. Butterworth, priest in charge at the Club-land Church, 14, Knatchbull-road, S.E.5, has a scheme in hand for the extension of the church and the erection of a new boys' and girls' club. The cost is estimated at approximately £5,000. Plans are to be prepared.

Carshalton.—HOTEL.—A company, called the Raleigh Refreshment Houses, Ltd., has been formed, with registered offices at 43, Great Marlborough-street, W.1, to erect a large hotel at the corner of Bishopsford-road and Wrythe-lane, at a cost of approximately £30,000. The plans have been prepared by Messrs. Petch and Fermaud, 8, Buckingham Palace-road, S.W.1, in association with Messrs. Yates, Cook and Darbyshire, 43, Great Marlborough-street, W.1. The contract has been placed with Messrs. Thomas and Edge, Ltd., Station-chambers, Eton-street, Woolwich, S.E.

Chelsea.—FLATS.—The Central London Property Trust, Ltd., 7, Pall Mall East, S.W.1, are to erect a block of flats on a site in Sloane-avenue, Whiteheads-grove, and Draycott-avenue. The plans are by Mr. G. K. Green. Messrs. L. G. Mouchel and Partners, Ltd., engineers, 38, Victoria-street, S.W.1, are connected with the scheme.

Crayford.—FACTORY.—We understand that Messrs. Dussek Bros., and Co., Ltd., of Verney-road, S.E.16, are having new works erected. Messrs. W. Bridges and Co., 37, Parliament-street, S.W.1., are the consulting engineers, and Messrs. Holland & Hannen and Cubitts, Ltd., 1, Queen Anne's-gate, S.W.1, are the builders.

Dagenham.—DEPOT.—The L.M. and S. Ry. have authorised the erection of a large goods depot and warehouse at Dagenham Dock, E. The contract has been placed with Messrs. John Mowlem and Co., Ebury Bridge-road, S.W.1. The plans have been prepared by the company's engineers at Euston Station, N.W.1.

Deptford.—PREMISES.—Mr. T. Graham Crump, 1, Addiscombe-road, Croydon, has submitted an application to the Deptford B.C. to build and drain new premises at Nos. 91-93, New Cross-road.

Dollis Hill.—CHURCH.—The new church of St. Francis of Assisi is now being erected from plans prepared by Mr. Harold Gibbons, F.R.I.B.A., Abbey House, Victoria-street, S.W.1. Messrs. Milsom and Rosier, 73, Canning-road, Wealdstone, are the builders.

Eltham.—ALTERATIONS.—A contract has been placed with Mr. George Barker, 48, New-road, Whitechapel, E., for alterations, etc., to St. Mary's Convent Chapel. The plans have been prepared by Mr. G. Trotman, 75, Bushey Hill, S.E.

Epsom.—EXTENSIONS.—Messrs. William A. Pite, Son and Fairweather, 12, Carteret-street, Westminster, S.W.1, are the architects for new extensions to the Epsom College. Messrs. Norris and Co. (Builders), Ltd., 266, High-street, Uxbridge, are the builders.

Finsbury.—HALL.—Further to the details published last week, it is learned that the plans for the proposed new hall and club projected at St. Clement's Church, City-road, E.C.1, will be prepared by Messrs. George Hubbard and Son, 45, New Bond-street, W.1. No contracts have been placed yet.

Finsbury. — HOUSING. — The Finsbury Borough Council are inviting tenders for the erection of 119 tenements on a site in Baker-street, W.C.1. The architect to the Council is Mr. E. C. P. Monson, F.R.I.B.A., of Finsbury Pavement House, 120, Moorgate, E.C.2.

Forest Hill.—EXTENSIONS.—The County Architect, Mr. G. Topham Forrest, F.R.I.B.A., is preparing plans for proposed extensions to the Horniman's Museum.

Hackney.—RECONSTRUCTION.—The L.C.C. recommend £10,145 in respect of the cost of making good damage caused by fire at the Hackney sub-station.

Hackney.—REBUILDING.—Messrs. E. B. Holmes and Co., Ltd., 157, Mare-street, Hackney, are rebuilding premises at 215 and 217, Mare-street, which were recently damaged by fire, and also carrying out further structural improvements. The work is being carried out for Messrs. Nathaniel Fortescue Estates, Ltd., of 103, Cannon-street, E.C.4., to the plans and quantities of Mr. Frank Fortescue, 103, Cannon-street, E.C.4. Messrs. H. Young and Co., Ltd., Thornycroft House, Smith-square, S.W.1, are carrying out the constructional steelwork.

Leyton.—BUILDING.—Tenders are being invited by the T.C. for the erection of the superstructure at the public baths, High-road, Leyton, E.10. The works comprise brickwork, upper floors and roofs, bath linings and finishings generally. Plans are by Mr. A. P. Howell, Borough Engineer and Surveyor.

Mitcham.—BAKERY.—The Royal Arsenal Co-operative Society, Ltd., Powis-street, Woolwich, S.E., have acquired a site in Streatham-road, for extensive premises, including bakery, etc. The building work will be carried out by the society's Works' Department, under the direction of their own architect, Mr. Samuel W. Ackroyd, A.R.I.B.A., Commonwealth-buildings, Albion-street, Woolwich, S.E.

Morden.—ALTERATIONS.—Plans have been approved for alterations to the "Crown" public-house. Work will be carried out under the direction of Mr. Nowell Parr, F.R.I.B.A., 42, Cranley-gardens, South Kensington, S.W.7.

Peckham.—IMPROVEMENTS.—For improvements to the Peckham Post Office, H.M.O.W. have placed a contract with Messrs. J. Mowlem and Co., Ltd., 91, Ebury Bridge-road, S.E.1.

Peckham.—BUILDING.—The L.C.C. has sanctioned an application of the Trussed Steel Concrete Co., Limited, on behalf of Messrs. Wallis, Gilbert and Partners, architects, 29, Roland-gardens, S.W.7, for erection of a building upon the site of 159 and 161, Peckham-rye, Peckham, next to Solomon's-passage.

Romford.—EXTENSIONS.—Messrs. F. Hutton and Son, Birch, Colchester, have secured the contract for extensions to the post office, for H.M.O.W.

Southwark.—BUILDINGS.—The L.C.C. has sanctioned the erection of one-story shop buildings on the forecourts of 5 and 7, Rockingham-street, Southwark, for Mr. R. Astley.

Stanmore.—GARAGE.—We understand that Mr. A. Whitehead, architect, 91, Vancouver-road, Edgware, is preparing plans for a new garage and petrol station at Great Stanmore.

Stoke Newington.—GARAGES. — The B.C. has passed plans submitted by Mr. G. G. C. King, of 44, Westbury-road, Bowes Park, N.11, for garages at rear of 440, Seven Sisters-road, to abut upon Lordship-road.

Victoria Docks. — REBUILDING. — The Mission to Seamen, 11, Buckingham-street, W.C., are to rebuild their Institute in Victoria Dock-road, E. The cost is estimated at about £35,000 Plans will be prepared shortly.

Wallington.—SHOWROOMS.—A block of showrooms with flats over are to be erected on a site at Cottesbrook, Wallington. The builders are Messrs. Hollands and Boakes, 9, Beddington-gardens, Wallington, who have prepared the plans. The work is estimated at about £12,000.

Wealdstone.—SHOPS.—Plans have been prepared by Messrs. Hillier, Parker, May and Rowden, estate agents, 27, Maddox-street, W.1, for shops at the corner of High-street and Gordon-road. The building contract for this work has not yet been settled.

Wembley. — SHOPS. — Messrs. Haymills, Ltd., builders, 1, Grand-parade, Wembley-park, are negotiating with the council in connection with a proposal to build a large block of shops and flats at the corner of The Avenue and Cottingham-road. The company's architects are Messrs. Welch, Cachemaille-Day and Lander, 7, New-square, Lincoln's Inn, W.C.2.

West Croydon.—ADDITIONS.—Also alterations are in hand at the West Croydon Congregational Church, London-road, costing about £1,400, for the Rev. E. W. Coltman. Plans have been prepared by Mr. Victor Wilkins, F.R.I.B.A., York-buildings, Adelphi, W.C.2., and the building work is being carried out by Messrs. E. H. Smith (Croydon), Ltd., 48, Wellesley-road, Croydon.

West Dulwich.—GARAGE.—A new garage building is to be erected in Martell-road, S.E.2, from plans prepared by Mr. A. Burnard Geen, 122, Victoria-street, S.W.1.

Wimbledon.—ALTERATIONS.—The owners of the "Freeman's Arms," public-house, The Broadway, S.W., have under consideration the carrying out of alterations and additions, including a new car park at the rear. The plans have been prepared by Mr. Joseph Hill, F.R.I.B.A., 34, Gordon-square, W.C.1. No contracts have been placed yet.

Yiewsley.—COTTAGES.—For the erection of 38 non-parlour cottages at Falling-lane, Yiewsley, for the U.D.C., Mr. W. T. Morgan, F.S.I., surveyor, has prepared plans. The tender of Mr. Geo. F. Taylor, contractor, 300, Northumberland-avenue, Ealing, W.5, has been provisionally accepted at £13,490

Appointments.

The Secretary of the Department of Scientific and Industrial Research announces that under the Order in Council dated February 6, 1928, the Lord President of the Council has appointed Professor Alfred Fowler, D.Sc., F.R.S., and Sir Clement D. M. Hindley, K.C.I.E., M.Inst.C.E., M.Inst.T., M.I.E. (Ind.), to be members of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research, in place of Sir J. Alfred Ewing, K.C.B., J.P., LL.D., D.Sc., Sc.D., F.R.S., M.Inst.C.E., and Sir David Milne-Watson, LL.D., D.L., who have retired on completion of their terms of office. The Lord President of the Council has also appointed Brigadier-General Sir Harold B. Hartley, C.B.E., M.C., F.R.S., to be Chairman of the Fuel Research Board, and Mr. N. V. Sidgwick, O.B.E., Sc.D., F.R.S., to be Chairman of the Chemistry Research Board of the Department of Scientific and Industrial Research, in place of the late Sir Richard Threlfall, G.B.E., F.R.S.

British Standard Specifications.

The following British Standard Specifications have been issued:—461—1932.—Bordeaux connections for wire rope and chain for general engineering purposes. 462—1932.—Bulldog grips for wire ropes for general engineering purposes. 463—1932.—Sockets for wire ropes for general engineering purposes. 464—1932.—Thimbles for wire ropes for general engineering purposes. Copies may be obtained from the Publications Department, British Standards Institution, 28, Victoria-street, London, S.W.1, price 2s. 2d. each, post free.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1932.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Brick-layers.	Car-penters Joiners.	Plas-terers.	Slaters.	Plum-bers.	Pain-ters.	Lab-ourers.
Aberdare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Accrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aldershot	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Alfreton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Alnwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Altrincham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashford (Kent)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ashington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ashton-under-Lyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aylsham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Banbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barnsley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barnstaple	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Barrow-in-Furness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Basingstoke	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bath	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Berwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bexhill	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bishop Auckland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackburn	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackpool	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bognor Regis	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bolton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford-on-Avon	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Braintree	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromsgrove	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bromyard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Bungay	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Burnley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Burton-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury St. Edmunds	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Buxton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cambridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Canterbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Cardiff	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Carlisle	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Chelmsford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Cheltenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chesterfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chorley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cirencester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Colchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Coventry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cranbrook	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Crewe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cromer	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Darlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Deal	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Denbigh	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Derby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Devizes	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Dewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Doncaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dorchester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dorking	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Dovercourt	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Driffield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Droitwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dudley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Durham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
E.Glam.(Mon.Val.)	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ely	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Exeter	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Exmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Fakenham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Felixstowe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Folkestone	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Frome	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Glossop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gloucester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Godalming	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Goole	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gosport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grantham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gt. Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Grimsby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Guildford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Halifax	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harpenden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Harrogate	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hartlepools	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Hastings	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hatfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hednesford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Herne Bay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hertford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hitchin	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hoddesdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Holt	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Huddersfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hull	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hunstanton	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Huntingdon	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Isle of Wight	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Keighley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kettering	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kidderminster	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kings Lynn	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leamington Spa	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leicester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leighton Buzzard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lichfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Lincoln	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Littlehampton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
London—								
12 m. radius	1/7½	1/7½	1/7½	*	1/7½	1/7½	1/6½	1/2½
12-15 m. radius	1/7	1/7	1/7	*	1/7	1/7	1/6	1/2½
Loughborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lowestoft	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Macclesfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Malvern	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Manchester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Mansfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Margate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Market Harborough	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Matlock	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Melton Constable	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Melton Mowbray	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Merthyr Tydfil	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Middlesbrough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newark	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Newbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newcastle-on-Tyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newcastle-u-Lyme	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
New Forest	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newport, Mon.	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Nottingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nuneaton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oakham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Oldham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Peterborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Pontypridd	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ramsgate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redditch	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Reigate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Retford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ripon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Rugby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Saffron Walden	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
St. Albans	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
St. Helens	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0½
Saxmundham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Scarborough	1/5½	1/5½	1/5½	1/5½	1/5½	1 5½	1/5½	1/1½
Sevenoaks	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Sheffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Shrewsbury	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sittingbourne	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
South Shields	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stevenage	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Stockport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stockton-on-Tees	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stoke-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourbridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stourport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stowmarket	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Stratford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stroud	1/4	1/4	1/4	1/4	1/4	1/4	1/3½	1/-
Sunderland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swaffham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Swansea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swindon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Tamworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Thetford	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Torquay	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Totnes	1/4	1/4	1/4	1/4	1/4	1/4	1/3½	1/-
Trowbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Tunbridge Wells	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Uttoxeter	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Wakefield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsall	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsden	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warminster	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Warrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wells (Norfolk)	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Welwyn Gar. City	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
West Bromwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Weston-super-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Whitby	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wigan	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Winchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wisbech	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wolverhampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Woodbridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Worcester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worksop	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worthing	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wrexham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wycombe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wymondham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
York	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st June, 1932, is 1/9 per hour.

For Building Trade wages in Scotland, see page 705.

NEW CINEMAS

Devizes.—Mr. A. A. Pilkington, Corn Exchange, Devizes, Wilts, proprietor of the Devizes Picture Palace, which was destroyed by fire recently, is considering the erection of a new cinema on the site of the gutted building. The architects are Messrs. Satchwell and Roberts, 6, New-street, Birmingham.

Hornchurch.—Mr. Leslie H. Kemp, A.R.I.B.A., 38, John-street, Bedford-row, W.C., is now preparing the final plans for the proposed new cinema for the Hornchurch Cinemas, Ltd. The building will include seating accommodation for 3,000 persons, lounges, car park, etc. The cost is estimated at approximately £75,000. Building tenders have not yet been invited.

King's Cross.—Mr. Andrew Mather, L.R.I.B.A., Leicester Square-chambers, Leicester Square, W.C.2, has prepared plans for the conversion of the Regent Theatre, King's Cross, N., as a cinema, for a company with which Mr. Nat Cohen is associated. The cost of reconstructional work, furnishings, etc., is placed at £10,000. A contract for the building work has been placed with Messrs. Marchant Hirst and Co., 136, Highgate-road, N.W.5.

Nailsworth.—A new cinema, the Savoy, is to be erected in Bristol-road, for a local syndicate. No contracts have been placed yet, but preliminary plans have been prepared by Mr. E. H. Pick, The Croft, Newmarket-road, Nailsworth, Glos.

Newcastle-on-Tyne.—The Town Improvement and Streets Committee of the Corporation have approved plans for a new cinema on the Two Ball Lonnen estate. Mr. Stanley Rogers, "Gwenholme," Jesmond Park East, Newcastle, is the promoter of the scheme. The hall will accommodate 1,238 people. The joint architects are Mr. F. M. Dryden, Market-street, Newcastle, and Messrs. J. H. Morton and Son, Martin's Bank Chambers, Fowler-street, South Shields. Tenders have not yet been invited.

Penge.—Alterations, etc., are to be made to the Penge Theatre for the Provincial Cinematograph Theatres, Ltd., 123, Regent-street, W.1. The contract has been placed with Messrs. McLaughlin and Harvey, Ltd., 24, Highbury-grove, N.5. Plans have been prepared by the company's architect, Mr. W. E. Trent.

Southwell, Notts.—A contract has been placed with Messrs. Henry James, of Mansfield, for the memorial hall and cinema to be erected in Honeyknab-lane, Oxton, Southwell, for the Memorial Building Committee. The architects are Messrs. A. Brocklehurst and Co., F.R.I.B.A., Martin's Bank-buildings, 10, Norfolk-street, Manchester.

Westbury-on-Trym.—Local interests are to build a new cinema in Canford-lane to seat 800 persons, to the plans of Mr. W. H. Watkins, F.R.I.B.A., Sun-buildings, 1, Clare-street, Bristol. The contract has been placed with Messrs. Hyatt and Neate, Westbury, Bristol.

The Overloading of Cranes.

The importance of compliance with the Factory and Workshops Act in regard to the proper loading of cranes is emphasised by an accident which occurred during the construction of the new grand stand at the Arsenal Football Club Ground, Highbury. A small travelling jack crane used for hoisting concrete blocks overturned on a track on a platform 50 ft. above the ground and crashed to the floor: no one was hurt. On October 12, at North London Police Court, the sub-contractor was summoned under the Factory and Workshops Act, Regulation 12 (*a*) of the Building Amendment Regulations, for loading the crane beyond the safe working load, and also for not having a certificate of test examination on the premises. He pleaded "Guilty." On the summons for overloading the crane the magistrate imposed a fine of £3, with an order to pay 28s. costs, and on the second summons a fine of 10s.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

OCTOBER 26.

Cork.—Houses.—108 houses at Griffin's Field, Blarney-st., for C.B. J. R. Boyd-Barrett, A.R.I.B.A., 61, South Mall, Cork. Dep. £2 2s.

Glasgow.—Heating.—Heating installation at St. Roch's Elementary school extension, 267, Garngadrd., N., for Corporation. Education Offices (Property Dept.), 129, Bath-st. Dep. £1 1s.

Hyde.—Housing.—38 houses on Back Bower estate, for T.C. B.S. Dep. £2 2s.

Ipswich.—Ward.—New infirmary ward, solarium, lavatories and house for water softening plant at mental hospital, Foxhall-rd., for C.B. E. McLauchlan, B.S. Dep. £2 2s.

Oban. — Extensions. — To generating station building and plant foundations, for T.C. Kennedy & Donkin, 8, Broadway, Westminster, S.W.1. Dep. £2 2s.

Plymouth.—Repairs.—Also alterations to premises, 29, Looe-st., for T.C. Housing Estates Dept., 15, Princess-sq. Dep. £1 1s.

***Plympton.**—School.—Senior council school, for Devon County E.C. County Architect, 97, Heavitree-rd., Exeter. Dep. £1 1s.

Torquay.—Floor.—Raising of floor and provision of oak screen to foyer at the Pavilion, for T.C. B.E. Dep. £2 2s.

Waterford.—Houses.—16 3-roomed houses and 29 4-roomed houses, with roads and sewer works, at Morrisson's-rd., for Corporation. B.S., 12, The Mall. Dep. £2 2s.

Whitton, Ipswich. — Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1

OCTOBER 27.

Boherbue.—School.—National school at Boherbue, Co. Cork. Rev. I. Brick, P.P., Botherbue, Co. Cork.

Downpatrick.—School.—Technical and secondary school, for Down County Regional E.C. Castor J. Love, architect, 5, Wellington-place, Belfast.

Glasgow.—Houses.—66 at Calton, for Corporation. D. Stenhouse, T.C.

Ludlow.—Housing.—Four non-parlour three-bedroomed houses at Craven Arms, for R.D.C. Capt. S. N. Shrimpton, L.R.I.B.A., Knighton, Rads. Dep. £2 2s.

OCTOBER 28.

Aberdare.—Houses.—Supplying material and erecting 18 dwelling houses at Hirwaun and 32 at Trecynon, together with roads, sewers and all appurtenant works, for U.D.C. S. Dep. £2 2s.

Eastbourne.—Garage.—At the Head P.O., for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1.

***Leyton, E.10.**—Superstructure.—At the Public Baths. Town Clerk, Town Hall. Dep. £10 (Treasury Notes).

Newtown.—Houses.—92 at Newtown, Bo'ness, for West Lothian C.C. A. M. Smith, Sanitary Inspector, Linlithgow.

Tranent.—Houses.—50 three and four-apartment houses at Northfield, for T.C. Morham & Brotchie, 29, Hanover-st., Edinburgh.

OCTOBER 29.

Alton.—Fencing.—Laying sewers and erection of fences and gates, for Alton U.D.C. Clerk, Town Hall, Alton, Hants. Dep. £1 1s.

Caine.—Housing.—Block of 4 cottages at Cherhill; block of 4 cottages at Compton-Bassett, and a block of 4 cottages at Yatesbury, for R.D.C. Walter Rudman, A.R.I.B.A., 32, Market-place, Chippenham. Dep. £1 1s.

Glasnevin.—Heating.—New heating chamber and fuel store at Colaiste Caoimhin, Glasnevin, Dublin, for Commissioners of Public Works. T. Cassedy, Public Works, Dublin. Dep. £1.

Honiton.—Houses.—2 at Upottery, for R.D.C. R. J. Tucker, Acting Sanitary Surveyor. Dept. £1 1s.

Knutton (Newcastle-under-Lyme). — Institute. — Director of Education, Education Offices, Stafford. Dep. £4 4s.

Thurles.—Houses.—Two houses and two out-offices on the lands of Castlefogarty, Thurles, for Irish Land Commission. M. Deegan, Secretary, Upper Merrion-st., Dublin. Dep. £1.

Wildmore.—Playground.—Concrete playground for boys and repairs to Wildmore Council school, for Lindsey C.C. P. W. Birkett, County Architect, County Offices, Newland, Lincoln. Dep. £1 1s.

OCTOBER 31.

***Bideford, N. Devon.** — Isolation Hospital.—Orphoot, Whiting & Bryce, 1, John-st., Bedford-row, London, W.C.1. Dep. £2 2s.

Colchester.—Additions.—To Nurses' Home, for Essex C.C. County Architect, County Hall, Chelmsford. Dep. £2 2s., to the County Accountant.

Egham.—Building.—Public mortuary; ornamental main boundary wall and fence with subsidiary fencing works, and supply of ornamental and other iron fencing ready for fixing, at cemetery, Englefield Green, for U.D.C. R. & S.

Glamorgan.—Hostel.—Nurses' hostel at Penrhiwtyn Infirmary, near Neath, for C.C. W. Gough Jenkins, Deputy-Clerk of County Council, Glamorgan County Hall, Cardiff.

Halifax. — Hospital. — Isolation hospital at Northowram Hall, for C.B. D. T. Lloyd Jones, B.E., Crossley-st. Dep. £2 2s.

Heywood.—Offices.—New health offices and clinic, for T.C. B.S. Dep. £2 2s.

Linton, Cambs.—Cottages.—In various parishes, for the R.D.C. Clerk. Dep. £2 2s.

London.—Repairs.—Internal cleansing, painting and repairs at Millfield Hospital, Rustington, for L.C.C. Chief E., Old County Hall, Spring-gardens, S.W.1. Dep. £1.

***Norwich.**—Houses.—Moushold House estate & Catton-grove estate. City Engineer, Guildhall. Dep. £5.

Pocklington. — Housing. — 12 houses, Market Weighton, for R.D.C. A. J. Oliver, clerk. Dep. £2 2s.

Settle.—Houses.—12 at Hellifield, for R.D.C. F. R Birkhead, E. and S. Dep. £2 2s.

Thorne.—Conversion.—Of infirmary block into casual wards at county poor-law institution, Thorne, near Doncaster, for West Riding C.C. West Riding Architect, County Hall, Wakefield.

Torquay.—Telephone Exchange.—For H.M.O.W. Contracts Branch, King Charles' Street, London, S.W.1. Dep. £1.

NOVEMBER 1.

Buckland Newton.—Classrooms.—Three classrooms at Buckland Newton school, for Managers. County Architect's Office, Dorchester.

Exmouth.—Pavilion.—For U.D.C. Chief Financial Officer. Dep. £2 2s.

Wolverton.—Houses.—Sewers, roads, and 60 houses, at Bradwell-rd. (East), for U.D.C. A. E. Abbott, architect, Church-st., Wolverton. Dep. £10.

Various.—Works and repairs to public buildings, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. £1 1s.

NOVEMBER 2.

Atherton.—Houses.—76 non-parloured houses on Hag Fold Estate, for U.D.C. S. Dep. £2 2s.

Exeter. — Alterations and additions. — To telephone exchange, for H.M.O.W. Contracts Branch, King Charles'-st., S.W.1. Dep. £1.

New Delhi.—Fencing.—Steel wire iron galvanised fencing, for Indian Stores Dept. Dept. of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. No. G.X. 11927.)

Whelley, Wigan.—Houses.—For the Corporation. Town Clerk, Municipal Buildings, Library-st., Wigan. Dep. £3 3s.

NOVEMBER 3.

Eynsham.—Centre.—Practical subjects centre at Council school, for Oxfordshire C.C. T. O. Willson, Director of Education, County Offices, New-rd., Oxford. Dep. £1 1s.

Manchester.—School.—Erection of Green End junior boys' municipal school, Burnage, for E.C. Surveyor's Dept., Education Offices, Deansgate, Manchester. Dep. £2 2s.

Rowley Regis.—Housing.—Demolition of old brewery at Tippity Green and for erection on site of 4 non-parlour type houses, for U.D.C. C. Buckley, clerk, Council House, Old Hill, Staffordshire.

NOVEMBER 4.

Various.—Repairs and works to public buildings, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. £1 1s.

NOVEMBER 5.

***Chatham.**—Extensions.—To laundry, at Medway Hospital. County Architect, Sessions House, Maidstone. Dep. £2 2s. (payable to Kent C.C.).

Farnborough.—Houses.—28 houses and construction of road, paths, sewers, fences, for U.D.C. A. H. Dungay, architect, Alpha-chambers, Alexandra-rd., Farnborough, Hants.

NOVEMBER 7.

Hoyland Nether.—School.—New infants' school, for West Riding C.C. Education Officer, County Hall, Wakefield.

NOVEMBER 8.

Hemsworth. — Conversions.—Privy conversions, etc., at 1 to 11, Prospect-ter., South Kirkby, near Pontefract, for R.D.C. W. T. Lynam, E. and S.

NOVEMBER 14.

Wednesbury.—Houses.—100 non-parlour type on Park-lane and Myvod-rd. site, for T.C. B.E. Dep. £2 2s.

NOVEMBER 23.

***Manchester.**—Houses.—On Wythenshawe estate. Chairman, Housing Committee, Town Hall. Dep. £2 2s. (to City Treasurer).

NO DATE.

Bruichladdich.—Hall.—Erection of village hall. Wm. C. Henny, sec., Bruichladdich, Islay.

Cheswardine. — Pointing. — Of Cheswardine Church. Vicar.

***London, N.W.**—Flats. David W. Beck, 17, Dorset-sq., N.W.1.

Outwell.—Petrol Station.—Petrol-filling station and garage on Wisbech-rd., Outwell, for Radio Garage Co., Ltd. P. O. Pierce, architect and surveyor, Wisbech Dep. £1 1s.

Shrewsbury.—Abattoir.—Extensions of abattoir, for T.C. A. W. Ward, B.S.

Stradbroke.—Engine-house.—For P.C. F. C. Copping, Clerk, Stradbroke, Diss.

Todmorden.—Demolition.—Purchase, pulling down and removal of material in old stone-built mill known as Spa Hole Mill, nr. Sandbed, Todmorden. Sutcliffe & Sutcliffe, architects, New-rd., Hebden Bridge.

MATERIALS, etc.

OCTOBER 26.

Dublin.—Builders' Materials, etc.—For Commissioners of Public Works. T. Cassedy, secretary, Office of Public Works.

India.—Water Supply.—Supply of water sluice valves, for Indian Stores Department. Department of Overseas Trade, S.W.1 (Ref. G. 11928).

Loughton.—Road Materials.—For U.D.C. H. White, S.

NOVEMBER 1.

London.—Paving.—50,000 creosoted paving blocks, for Islington B.C. B.E.

NOVEMBER 5.

Northamptonshire.—Road materials.—For C.C. E. A. Black, C.S., Northampton.

NOVEMBER 7.

Dublin.—Varnishes, etc.—For Dublin United Tramways Co. (1896), Ltd. G. Marshall Harries, General Manager, 59, Upper O'Connell-st.

Singapore.—Tubes.—Galvanised wrought-iron unsocketed tubes, for Singapore Municipality. Dept. of Overseas Trade, S.W.1. (Ref. G.X. 11866.)

NO DATE.

Aden.—Tubes.—Galvanised wrought iron tubes and fittings, for Executive Committee of Aden Settlement. Chairman, Executive Committee, Aden Settlement.

ENGINEERING, IRON AND STEEL.

OCTOBER 28.

Wexford.—Bridge Works.—Reconstruction of north end of Ferrycarrig Bridge, provision of pile and other foundations and anchorages, lifting of opening span and its gearing (for independent repairs), and resetting of same on its bearings, for C.C. C.S., County Hall, Wexford. Dep. £5 5s.

OCTOBER 29.

West Sussex.—Reconstruction of Arundel river bridge, for C.C. H. W. Bowen, C.E. and S., Southgate House, Chichester. Dep. £5.

OCTOBER 31.

Congleton. — Water Scheme. — Two high-class pumping-station buildings on their properties in the parish of Odd Rode, for R.D.C. Herbert Lapworth, E., 25, Victoria-st., Westminster, S.W.1. Dep. £3.

Egypt.—Waterworks.—Construction of a "chamber" on the new intake at the Waterworks at Mansourah, for Municipalities and Local Commissions Section. Dept. of Overseas Trade, S.W.1. (Ref. G. 11875.)

Gosport.—Sewerage.—Completion of Fareham-rd. sewerage scheme, Gosport, for T.C. A. Barlow, B.E. Dep. £5 5s.

Uruguay.—Refinery. — Petroleum refinery, for Administration Nacional de Combustibles, Alcohol y Portland, at Montevideo. Dept. of Overseas Trade, Westminster, S.W.1. (Ref. A.X. 11394.)

NOVEMBER 1.

Woodbridge. — Reconstruction. — Of bridge, for Wilts C.C. H. S. Ganderton, C.S., Trowbridge. Dep. £2.

NOVEMBER 5.

Limerick.—Extension.—Extension to existing wet dock, for Harbour Commissioners. T. F. O'Sullivan, Harbour Engineer. Dep. £10 10s.

NOVEMBER 7.

Reigate.—Drainage.—Alterations and additions to existing sewage treatment works at Earlswood Common, for T.C. G. B. Kershaw & Kaufman, chartered civil engineers, 9, Victoria-st., S.W.1. Dep. £5.

NOVEMBER 10.

Egypt.—Waterworks.—Waterworks for the town of Galioub, for Egyptian Ministry of Interior (Municipalities and Local Commissions Section). Dept. of Overseas Trade (ref. G. 11888).

NOVEMBER 12.

Seaford.—Sewerage.—Construction of a storage tank, pump chamber and motor house in reinforced concrete, and installation of automatic electrically driven centrifugal pumps, and construction of new 21-in. and 9-in. dia. sewers and 12-in. cast-iron rising main, and reconstruction of one road in reinforced concrete for Low Level, for U.D.C. S. Dep. £2 2s.

NOVEMBER 28.

Belfast.—Shed.—Steel shed and collateral works on west side of Dufferin-rd., for Harbour Commissioners. T. S. Gilbert, consulting engineer.

DECEMBER 5.

India.—Reconstruction.—Of Nerbudda bridge at Broach, Bombay Presidency, India, for Bombay, Baroda and Central India Railway Co. S. G. S. Young, secretary, White Mansion, 91, Petty France, Westminster, S.W.1.

Johannesburg.—Steelwork.—Structural steelwork for cargo shed, Turning Basin, East London, for South African Railways and Harbours Board. Department of Overseas Trade, 35, Old Queen-st., S.W.1. (Ref. G.X.11918.)

South Africa.—Steelwork.—Supply of structural steelwork for cargo shed, Turning Basin, East London, for South African Railways and Harbours Board. Department of Overseas Trade, S.W.1 (Ref. G.X. 11918).

NO DATE.

Aden.—Tank.—One pressed steel tank, for Executive Committee of Aden Settlement. Chairman, Aden Settlement, Aden.

ROAD, SEWERAGE AND WATER WORKS.

OCTOBER 26.

Glasgow.—Roads.—Roads and sewers at Holmlea-rd., for Corporation. Director of Housing, 20, Trongate.

London.—Making-up.—Carriageway and footpaths in Hythe-rd., comprising tarmacadam on concrete foundation, artificial stone paving, relaying and redressing kerb, channels, etc., for Hammersmith B.C. R. Hampton Clucas, B.E. and S.

OCTOBER 27.

Slough.—Laying and jointing of about 400 yds. of 12-in. and 10,500 yds. of 10-in. cast iron or steel mains from Datchet to Farnham Common together with valves, connections to existing mains, and other appurtenant works, for U.D.C A. Bromly, Water Engineer.

OCTOBER 29.

Newcastle-under-Lyme.—Roads.—Construction of roads: Dartmouth-av. to Clayton-rd., and Clayton-rd. to Clayton-lane, for T.C. J. Griffith, T.C. Dep. £2 2s. each.

Whitefield.—Road.—Reconstruction of Dartmouth-rd., for U.D.C. J. Knight, S. Dep. £1 1s.

OCTOBER 31.

Alnwick.—Roads.—Roads and sewers for Clayport housing scheme, for U.D.C. G. Beaty, Town Surveyor. Dep. £2 2s.

Esher and the Dittons.—Sewers.—Laying of cast-iron pipe sewers at Thames Ditton, for U.D.C. L. V. S. Watson, clerk. Dep. £3 3s.

Gillingham.—Sewerage.—Construction of certain stoneware pipe, concrete tube and cast-iron pipe sewers and surface-water sewers and surface-water outfalls into the River Medway, for T.C. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £3 3s.

Gillingham.—Sewerage.—Construction of sewer connections in roads at Rainham, for T.C. W. H. Radford & Son, civil engineers, Albion-chams., King-st., Nottingham. Dep. £3 3s.

NOVEMBER 1.

Aldershot.—Making-up.—Of Connaught-rd., Canning-rd., Highland-rd. (part of), Elms-rd., for T.C. J. Neave, B. and S. Dep. 10s. 6d. each road.

Chingford.—Making-up. — Of Normanshire-drive, Norbury-rd., and part of Sunnyside-av., for U.D.C. S. J. Hellier, E. and S. Dep. £3 3s.

NOVEMBER 2.

Barrowford.—Making-up.—Of Rushton-st., for U.D.C. W. S. Green, S. Dep. £2 2s.

NOVEMBER 5.

Irby.—Construction.—Making of Coombe-rd. in township of Irby, for Cheshire C.C. S. H. Davies, District Surveyor. Brimstage-rd., Heswall. Dep. £1 1s.

NOVEMBER 8.

Chelmsford.—Main.—10-in. water main from reservoir at Longstomps to Admirals Park and Boarded Barns estate, for T.C. Acting Borough Engineer. Dep. £1 1s.

NOVEMBER 10.

Eedington.—Making-up.—Of St. Marks-rd., for U.D.C. E Bostock, S. Dep. £2.

NOVEMBER 14.

Cudham.—Footpaths.—Footpaths at recreation and burial grounds, West Cudham (Biggin Hill), provision and erection of iron unclimbable fencing and chain-link fencing, gates, etc., erection of public lavatories, provision of drainage and water supply, for P.C. H. B. Hampton, Clerk, Highfield, Biggin Hill, Westerham.

CURRENT AND PROPOSED BUILDING WORK*

In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E, for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Adwick-le-Street.—U.D.C. considering small-type houses.

Alfreton.—M.H. sanctioned 28 houses at Riddings.

Asfordby.—Rev. W. R. Finch, Vicar and Church Wardens propose church at Asfordby Hill.

Ashington.—Council Highways Committee to consider erecting shelters for 'bus passengers.

Atherton.—U.D.C. proposing lay-out on Hag Fold housing site for 76 houses. Plans by F. L. Boydell, S.

Axholme.—Rural Housing Co., Ltd., submitted plans for 22 houses at Epworth and 8 houses at Garthorpe.

Barnes.—Council approved plans for 6 semi-detached houses, Suffolk-rd., by R. B. Rowell, for A. Harvey.

Barnsley.—B.E. to proceed with preparation of layout and plans and estimates for houses on land in Darton area, to house tenants who will be displaced in connection with erection of covered market on Barraclough's Foundry site; additional stores accommodation (electricity dept.), at £950.—Plans approved:—Bishop of Pontefract and Committee, parish hall off Pontefract-rd., Lund Wood; Queen's Ground Sports Stadium, Ltd.—stands and building of greyhound racing tracks, Queen's-rd.; trustees of Farrar-st. Congregational Church—Sunday School Hall, Crookes-st.

Belford.—R.D.C. approved plans for rebuilding British Legion Club premises. A. Cheyne, County Council Architect, Moot Hall, Newcastle.

Blyth.—Sanction of Government received to scheme of T.C. to erect infants' school in Princess Louise-rd. L. Leeper, B.E.

Bradford.—Plans prepared for block of shops and offices for Co-operative Society, Ltd. Tenders invited. Plans by Architects' Dept., C.W.S. Building Section, Balloon-st., Manchester. Site in Sunbridge-rd.

Braintree.—U.D.C. accepted an offer of £2,500 from W. J. Courtauld, of Courtaulds, Ltd., who lives in neighbourhood, to provide work for local unemployed.

Bridlington.—It is understood that entertainment committee considering scheme for concert hall. T. Newton, Borough Architect.

Bromley.—T. C. approved:—C. H. Morrell, 12 houses, Green Way; C. White, 12 houses, Church-lane.

Bury.—T.C. to consider shops on site between Clerke-st. and Henry-st.

Cannock.—U.D.C. received M.H. approval to proposal to proceed with erection of 50 non-parlour houses on Pye Green site.

Canwell.—Arrangements for village hall at Canwell been submitted to Birmingham City Council by Agricultural and Small Holdings Committee.—Site for building, the cost of which the Highbury Trustees will meet, been selected at School Wood, opposite Canwell schools, at Lichfield.—Site has been cleared and tenders obtained, lowest of which amounted to £1,479 10s.

Caterham and Warlingham.—U.D.C. approved:—8 houses, Cromwell-rd. C. H. Harrington.—Lay-out, section 2 (34 houses), Hamsey Green. Wood McClelland.

Chertsey.—U.D.C. approved:—11 garages, The Grove, Addlestone, E. Clarke & Sons.

Chester.—G. E. Marshall, Raymond-bldgs., Gray's Inn, W.C.1, architect for greyhound racing track at junction of Brook-lane and Victoria-rd.

Coalville.—Miners' Welfare Committee propose pit-head baths at Whitwick Colliery.

Coventry.—Rev. W. Rooney, P.P., Church of Christ the King, Radford, proposes church hall. Plans by G. B. Cox, F.R.I.B.A., Harrison & Cox, architects, 109, Colmore-row, Birmingham.

Davyhulme.—P.C. approved:—7 pairs of semi-detached houses, Barton-rd. A. Locke.

Derby.—T.C. propose 45 flats on Exeter-st. and Exeter-place at £40,125. C. H. Aslin, Borough Architect, Municipal Offices.

Driotwich.—T.C. propose public conveniences off Victoria-sq. C. T. Butler, S.

Dublin.—Two British cocoa and chocolate manufacturers are combining to set up a new Irish industry in Dublin. They are J. S. Fry & Sons, Ltd., of Somerdale, and Cadbury Brothers, Ltd., of Bournville. The new company is Fry-Cadbury (Ireland), Ltd. A site has been chosen in Dublin, and building operations are already in hand.

*See also List of Contracts, Competitions, etc.

Dukinfield.—Corporation propose painting exterior of 198 houses on Clarendon Field site.

Ealing.—Plans passed by T.C.:—A. Graham, 33 houses, Huxley-gardens, Park-av. and Park-close; Taylor, Woodrow, Ltd., architect, J. M. Wilson, St. Quivox, Hayes, 66 houses and 4 shops with rooms over, Empire and Bilton-rds.; A. E. Murdock, 10 houses, Rockford-av.; London and Provincial Building Co., 21 houses, Brunswick-rd.; R. Fielding & Sons, Blackpool, 14 houses, Bideford-av.; Second United Women's Homes Association, architects, Hendery & Schooling, 6, Bedford-row, W.C.1, block of flats, Gunnersbury-lane; A. S. Murdoch, 12 houses, Dawlish and Bideford-avs.; Tucker & Warren, architect, R. J. Ward, 107, Uxbridge-rd., W.5, 87 houses, Cuckoo Dene; Perhil & Co., architect, J. P. Blake, block of 12 flats, Perhil-parade; W. Smirk & Sons, architect, G. L. Russell, 1, Broad-street-bldgs., Liverpool-st., E.C.2, 135 houses, Bilton-rd., Fairfield-drive, Federal-rd. and Perimeade-rd.; G. Wimpey & Co., Ltd., The Grove, Hammersmith, 178 houses, Frazer, Francis and Sarsfield-rds.; J. Marshall, 8 houses, Tavistock-av.; Saunders & Gardner, block of 6 flats, York-av.; G. Ravenshear, architect, F. C. Mitchell, 80 George-st., Portman-sq., alterations and additions to Grand Cinema, Cherrington-rd.; Lloyds Bank, Ltd., alterations and additions to 44 and 45, The Broadway, W.5; Barclays Bank, Ltd., architects, Welsh, Cachemaille-Day & Lander, 7, New-sq., W.C.2, alterations to 8, The Crescent, Greenford-rd.

Felling-on-Tyne.—U.D.C. to enter into negotiations for purchase of Felling House and grounds for housing purposes. C. W. Hall, architect.

Fifeshire.—Bridge estimated at £2,000 to be reconstructed at Stravethie by Road Board. Plans by County Engineer, County-bldgs., Cupar.

Glasgow.—Reconstruction at Whitehill-st. Dennistoun. W. Metcalf & Sons, architects, 140, London-rd., Bridgeton.—Reconstruction and additions at 294, Byars-rd., Partick. Jas. M. Munro & Sons, architects, 134, Bath-st.

Harpham.—Parish Hall Committee decided to commence erecting building, cost approximately £750.

Harrow.—Council approved plans:—6 houses in Cavendish-av., E. Streather, by W. Thorpe; amended plan of new roads and sewers and 220 houses, Brickfields Bessborough estate, Westlake & Turner.

Hebburn-on-Tyne.—U.D.C. approved plans by Cackett, Burn-Dick & McKellar, Ellison-place, Newcastle, for extensions to packing shop at works of J. H. Holmes & Co.—U.D.C. appointed T. A. Page & Son, 67, King-st., South Shields, architects for extensions to Council offices.—U.D.C. to negotiate with trustees of Primitive Methodist Church for land at corner of Quarry-rd. and Victoria-rd., East, for houses. H. Paterson, S.—Tenders not yet invited for public-house at corner of Howe-st. and Victoria-rd., to cost £3,600. Architects, J. H. Morton & Sons, Martin's Bank-chams., Fowler-st., South Shields.

Hinckley.—U.D.C. propose 100 houses on Middle field-lane estate. J. S. Featherston. S.

Hove.—T.C. are considering school accommodation on Knoll estate at £9,000.

Huyton.—Council received sanction from M.H. to acquisition of land in Seel-rd., Huyton, for housing purposes

Ilkeston.—Plans passed by Corporation:—Alterations and additions to R.C. Presbytry, Nottingham-rd. Rev. Walford.

Keighley.—L.M. and S.R. Co. propose reconstruction of station bridge.—Bentley's Yorkshire Breweries, Ltd., propose public conveniences adjoining "Reservoir Tavern," West-lane.—E. G. Felgate, A.R.I.B.A., Borough Architect, Gas Offices, Cook-lane, to prepare plans for mortuary on site adjoining cemetery.—Trustees of Edmund Laycock propose development of land at Aireworth and erection of 75 houses.

Kendal.—Tenders being invited for extensions at Netherfield Works for Somervell, Ltd. Plans by —. Burnett, architect, Leeds.

Lanarkshire.—C.C. intend alterations at Cadder Schoolhouse and reconstruction of Hamilton Academy lecture hall.

Lancashire.—E.C. propose senior Council school at Blackrod, senior Council school at Brierfield and Council school at Westhoughton.—E.C. propose to purchase site for Council school and playing fields at Litherland and erect senior Council school at Great Crosby.—E.C. propose application for sanction to loan of £3,300 for branch library at Horwich.—P.A.C. propose additional accommodation for casuals at Copley View Clitheroe Institution. Cost £1,100.—P.A.C. approved scheme for alterations and extensions to casual wards at Chorley Institution at £1,700. S. Wilkinson, F.R.I.B.A., County Architect, 16, Ribblesdale-place, Preston.—County Architect, Preston, prepared plans for alterations to lavatory accommodation at Jericho Institution for P.A.C., at £320.—C.C. propose reconstruction of Loud Mytham bridge over River Loud at Chaigley. P. Schofield, County Surveyor and Bridgemaster, County Offices, Preston.—Application to be made to M.H. for sanction of loan of £250 for sports pavilion on playing fields of Failsworth and District schools by E.C.—E.C. propose additional pavilion to south of the present school pavilion on playing field at Woodlands-av. for Widnes Wade Deacon Grammar School.

Largs.—Dean of Guild Court passed plans:—5 bungalows, Sinclair-drive, W. Phillips, builder, Largs; 4 semi-detached cottages, Haco-st., Largs, G. H. Tyre & Sons, builders, Largs.

Leeds.—Quantities in course of preparation for amusement park on site of derelict works in Roundhay-rd. Architect, Col. Jas. E. Adamson, L.R.I.B.A., 56, Victoria-st., London, S.W.1.

Leicester.—Housing Committee of Corporation propose 120 houses on Freake's allotment ground between Forse-rd. and Beatrice-rd. A. T. Gooseman, B.E.

Lincoln.—P.A.C. proposing 2 additional blocks of Orphan Children's Home, St. Giles, at £6,300.

Liverpool.—Plans passed by Corporation:—26 houses, Chalfont-rd., E. M. Bellis, for Amalgamated Properties, Ltd.; alteration of offices, Mersey Flour Mills, 59-61, Burlington-st., R. Owens & Son, for E. Hutchinson; 15 houses, Doric-rd., Old Swan, A. E. Shennan, for Dykins & Briscoe; new office building, 24, Drury-lane, H. A. Thomas, for B.T.G. Trust, Ltd.; 4 shops, Queen's-drive, H. M. Blamphin, for J. McCann.

London (Battersea).—L.C.C. recommend borrowing by B.C. of £110,000 for housing on St. John's College estate.

London (Camberwell).—B.C. approved:—F. A. Powell, one-storey garage and workshop at 6, Ormside-st.; Saxton & Co., alterations to garage building, Brabourne-grove.

London (Deptford).—B.C. recommend additional shelters at Brockley Cemetery, £180; painting and redecorating work at New Cross Branch Library, £250; various works at Central Library, £462; painting dressing boxes at Laurie-grove baths, £110; various redecoration works at Town Hall, £170.

London (Lambeth).—B.C. applied for £973 for housing in Newburn-st., which L.C.C. recommend.

London (Lewisham).—L.C.C. recommend borrowing by B.C. of £561 for housing in Winchfield-rd.

London (St. Pancras).—For housing in Leighton-rd. and Lady Margaret-rd. L.C.C. recommend borrowing by B.C. of £35,360.

London (Stoke Newington).—B.C. received sanction from L.C.C. to borrow £16,720 for sewerage works.

London (Wandsworth).—B.C. recommend relief sewer in Hopton-rd. to be constructed from existing sewer in Madeira-rd. to existing Fallsbrook-rd. relief sewer, at £21,664.—Plans passed:—Bovis, Ltd., shop, for Marks & Spencer's, 130-134, High-st., Clapham; Holland & Hannen & Cubitts, Ltd., storage warehouse, Kimber-rd., Southfields; County of London Electric Supply Co., Ltd., alterations to electricity sub-station, rear of 55, Tooting High-st.; W. J. Marston & Son, alterations and additions, Central Office, Gas Co.'s premises, Fairfield-st., Fairfield; Fairweather & Ranger, factory, Duntshill-rd., Springfield; Wallis, Gilbert & Partners, extension to fitters' shop, Aluminium Plant and Vessel Co., Ltd.'s, premises, Point Pleasant, Southfield; B. de Helsby, 4 houses, Templeton-rd., Putney; County of London Electric Supply Co., Ltd., additions to electricity sub-station, Broadwater-rd., Balham; Hudson Bros. (Builders), Ltd., alterations and additions, Hospital for Incurables, West Hill, Southfield; H. R. Ross, alterations, 201-203, Upper Richmond-rd., Putney; John Laing & Son, Ltd., 14 blocks of flats, North House estate, Putney Hill, Putney.

London (Woolwich).—L.C.C. recommend borrowing by B.C. of £8,560 for housing on Middle Park housing estate.

Lowestoft.—C.B. approved:—Mrs. E. C. Burton, 12 semi-detached houses, Church Farm-rd.

Lundwood.—Plans approved for parish hall for Bishop of Pontefract's Church Extension Scheme.

Macclesfield.—T.C. propose extension of casual wards at institution at £2,000.

Manchester.—E. W. Hardy, 26, Corporation-st., proposes office block and showrooms at corner of Deansgate and St. Mary's-gate. Plans by H. S. Fairhurst & Son, F. & A.R.I.B.A., 55, Brown-st. Estimated cost £42,000. Tenders invited.

Middlesbrough.—T.C. approved:—Dairy building, Marton-rd., Grove Hill, Co-operative Society's Bakers and Butchers; 9 houses, Belle Vue-rd., Linthorpe, and 7 houses, King's-rd., Linthorpe, T. Pearson; 5 pairs semi-detached houses in Quadrant shape, C. H. Webster; 8 houses, Eastbourne-rd., C. H. Webster; extension of premises for warehouse at Marsh-rd., Northern Poultry Foods Co.; 8, terrace houses, Clairville-rd., Gilbert Long, Ltd.

Monmouth.—T.C. agreed that M.H. be requested to sanction the borrowing of £712 for purchasing housing site at Wyesham.

Nelson.—T.C. propose buildings on site of old Market Hall at £4,500. F. V. Alexander, B.S.

Neston.—U.D.C. urging Cheshire C.C. to commence building modern school in Mellock-lane, Little Neston, with accommodation for 350 children.

Newcastle-on-Tyne.—Plans for church and parish hall in Roman-av., Walker, deposited by Bishop of Newcastle's Diocesan Extension Committee, been approved by Town Improvement Committee. C. F. Murphy, architect, Newgate-st., Morpeth.—Governors of Church High School have under consideration scheme for dining room, additional class-rooms and eventually new library.—C. S. Errington, 21, Grainger-st. West, is architect for 9 houses in Barnshaw-rd.—Rev. T. Wilson, Gosforth Grammar School, 36, Northumberland-st., acquired Jesmond Dene House, which he proposes converting into school for girls. No architect appointed.

Nottingham.—Salvation Army Society propose assembly hall on Apsley estate to cost £2,450.—Parochial Council of Lenton Parish Church proposes church hall on Lenton Abbey housing estate.—T. C. Howitt, architect, Exchange-bldgs. East, preparing plans for church and church hall at Wollaton for Parochial Council of St. Mary's Church. Site in Derby-rd. Church will have seating for 440 persons, and the church hall for 250. Contracts are not let.

Plymouth.—City Architect been instructed, on receipt of Board of Control's approval of plans for extension of mental hospital at Blackadon, to invite tenders. Estimated cost £38,000.—Plans submitted to B. of E. for extensions to Plymouth College. Estimated cost £8,000.

Pocklington.—U.D.C. to provide public hall.

Portsmouth. — T.C. approved:—Dye Bros., 18 houses, Hartley-rd.; V. Dye, 13 houses, Magdalene-rd.; J. E. Jones & Son, 16 houses, Evelegh-rd., Farlington; F. J. Privett, extension of premises, 1, Festing Buildings, Highland-rd.; Roy Corke, Ltd., for F. Currey, Ltd., rebuilding business premises, 251, Highland-rd.; Ecclesiastical Commissioners for England, additions to vicarage, St. Saviour's Church, Twyford-av.

Rotherham.—R. Jenkins & Co., Ltd., boiler makers, propose building in Wortley-rd.—T.C. approved plans for 34 houses on Badsley Moor-lane and Byron-drive.

Ryton-on-Tyne.—Intimation been received by U.D.C. that M.H. is prepared to sanction 25 two-roomed houses for aged people. Newcombe & Newcombe, appointed architects, 23, Eldon-sq., Newcastle-on-Tyne.

Salford.—E.C. acquired site in Langworthy-rd., Seedley, for sub-station. Electrical Engineer, L. Romero, Town Hall, Bexley-sq.

St. Helens.—Corporation received M.H. sanction to borrowing of £25,595 for houses, £4,538 for roads and £1,433 for sewers on Corporation Eccleston housing site, and £2,007 for construction of houses on Jackson-street site.

Sheffield.—J. Davis & D. Slack, promoting scheme for greyhound racing track at Hyde Park. Accommodation provided for 15,000 persons.

South Shields.—T.C. approved:—proposed petrol station, Fowler-st., J. Bainton; 6 bungalows, Sunniside estate, J. T. Armstrong & Son.

Stanley.—Plans by T. Welsh, Louisa Colliery, Stanley, for United Methodist Church at South Moor, been approved by U.D.C.

Stockport.—T.C. have approved scheme for covering river Mersey between the Wellington Arches and "Mersey Hotel," to cost £25,000.

Stourport.—Parks and Buildings Committee reported that, in accord with request of Ministry, they had modified plans for proposed 40 houses in Tan-lane, and tenders were being advertised for.

Stratford-on-Avon.—Board of Management of Stratford-on-Avon Hospital, Alcester-rd., propose operating theatre at £2,500.

Sunderland.—Health Committee decided to explore possibility of providing additional accommodation at Grindon Hall.—Schemes in preparation by T.C. for 442 houses. T. P. Collinge, B.S.—Contract not yet been placed for cabinet works to be built by H. Binns, Son & Co., Ltd., Fawcett-st. Architects, W. & T. R. Milburn, 17, Fawcett-st.—Scheme for rebuilding of "Wearmouth Bridge Inn" been approved by Licensing Justices. Tenders not yet invited. Architects, Hetherington & Wilson, County-chams., 52, Westgate-rd., Newcastle.

Sutton Coldfield.—Sutton Laundry, Ltd., propose office block in Coleshill-rd. Architect, J. H. Wilson, F.R.I.B.A., 30, Waterloo-st., Birmingham.

Swansea.—C.B. resolved, on recommendation of Borough Estate Agent, that land in Gorse-rd. be appropriated for school site.—Council recommend borrowing amounts in respect of the provision of roads and sewers in connection with Corporation's housing schemes:—Maesteg, £19,188 8s. 9d.; Morriston, £9,551 11s. 2d.; Townhill North No. 1, £29,991 5s. 9d.; Mayhill North, £15,832; Townhill North No. 2, £55,904.—Director of Education reported that B. of E. had written stating that new boys' offices were required for Powys-av. Council school and he had therefore instructed Borough Architect to prepare plans. Borough Architect estimated cost to be £194.—Borough Architect to be instructed to extend existing system of heating at Technical College to the Bakery Dept. at £200.—Plans passed:—11 garages, rear of Westbourne-rd., Sketty, C. H. Wastell; mission hall, Gorse-rd., R. F. Parsons; sports pavilion, recreation ground, Parks Committee.

Taunton.—T.C. to demolish buildings and erect 25 new houses in various places.

Thornaby-on-Tees.—Plans for lay-out of 100 houses on Thornaby Grange Farm estate been approved by T.C. —. Handel-Kay, B.E.

Thorne.—R.D.C. considering 50 houses at Moorends.

Upton.—R.D.C. reported that Ministry had agreed to Council obtaining tenders for houses on Welland site and recommended that Clerk write to Ministry asking for sanction to erection of 174 houses to be erected on sites previously selected.

Wakefield.—City Council approved:—6 houses, Major-st. G. A. Nicholson.

Walsall.—B.S. been instructed to submit plans for 65 houses on various sites.—Housing Committee propose further 100 non-parlour type houses, and B.S. been instructed to prepare layout plans for 50 of such houses in Palfrey area.

Watford.—T.C. instructed B.S. to report on re-housing in Riverside-rd.—B.S. to obtain tenders for 130 houses on Leavesden Green housing estate.

West Hartlepool.—T.C. approved:—F. Craven, 32 houses, Chatham-rd. and Ashley-gdns., 29 houses, Oakley-gdns., and 46 houses, Marston-st.; Harland & Parker, 15 houses, Brenda-rd. and Borrowdale-st.; C. M. Yuill, 7 houses, Wolviston and Stratford-rds.; J. C. Moffatt, 13 houses, Westbourne-rd.

Whitehaven.—A housing scheme for 120 houses at £35,850, being submitted to M.H. for approval.

Wigan.—E.C. propose Council school on land at Mesnes. W. A. Walker, B.S.—T.C. approved scheme for shelter for motor 'bus passengers on Market-sq. B.E.

Worksop.—T.C. approved plans for extension of Miners' Institute for Manton Miners' Welfare Committee.

York.—T.C. approved: Northern Motor Utilities, Ltd., additions, Fose Islands-rd.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by enquiry

[PRINCIPAL CHANGES OF THE WEEK.—Fluted Glass is reduced, 15 oz. by $\frac{7}{8}$d. per ft. and 21 oz. by $\frac{1}{2}$d.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£	s.	d.
Best Stocks	4	3	6
Second Hard Stocks	3	18	6

Per 1,000. Delivered at London Goods Stations.

	£	s.	d.		£	s.	d.
"Phorpres"	2	11	3	Flettons, B'llu'se	3	5	3
Flettons at King's Cross	2	11	3	Best Blue Pressed Staffs	9	5	0
Do., grooved for Plaster	2	13	3	Do. Bullnose	9	15	0
				Blue Wire Cuts	7	5	0

White Midhurst Facing Bricks (delivered London site)	5	0	0
"Phorpres" Whites (do.)	3	17	3
"Phorpres" Rustic Facing Bricks, delivered Central London ..... per 1,000	3	12	3

Best Stourbridge Fire Brick :—

2½ in.	8	11	0	3 in.	10	3	0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21	0	0	D'ble Str'tch'rs	29	10	0
				D'ble Headers	26	10	0
Headers	20	10	0	One side and two Ends	30	10	0
Quoins, Bullnose and 4½ in. Flats	27	10	0	Two Sides and one End	31	10	0
				Splays, and Squints	28	0	0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s.	d.		s.	d.
2 in. per yd. super.	1	11	3 in. per yd. super	2	9
2½ in. " "	2	4	4 in. " "	3	6

	s.	d.	
Thames Ballast	8	0	per yd.
Pit Sand	11	0	" "
Thames Sand	11	0	" "
Best Washed Sand	11	6	" "
¼ in. Shingle for Ferro-Concrete	8	6	" "
½ in.	11	0	" "
¾ in. Broken Brick	10	6	" "
Pan Breeze	8	0	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test

	£	s.	d.
In Jute Sacks (11 to ton)	£2	4	9
In Free Paper Bags (20 to ton)	2	6	0
Alongside Vauxhall in 80 Ton Lots			
Jute Sacks (11 to ton)	1	17	9
Free Paper Bags (20 to ton)	1	19	0
Ferrocrete per ton extra on above	0	7	6
Vitrocrete per ton extra on above	0	7	6
Lightning Brand Aluminous Cement in Jute Sacks (20 to ton)	5	2	9 to 5 8 6

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months, carriage paid.

Super Cement (Waterproof) Paper Bags free	3	16	0
Ciment Fondu (F.O.R. Works)	4	15	0
Roman Cement	6	15	0
Parian Cement	5	15	0
Keene's Cement, White	5	15	0
" " Pink	5	10	0
Plaster, Coarse, Pink	3	0	0
" " White	3	12	6
" Fine	4	12	0
Sirapite, Coarse	3	9	0
" Finish	3	17	0
Grey Stone Lime	2	10	9
Chalk Lime	2	10	9
Best Ground Blue Lias Lime	1	17	6
Hair ..... per cwt.	2	2	6
Granite Chippings	1	12	0

NOTE. — Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in sacks 37s. 0d. per ton at rly. dep.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. 2 d. 10

BEER STONE.—RANDOM BLOCK—
Free on rail at Seaton Station, per ft. cube ... 2 3
Delivered free on rail Nine Elms, S.R. per ft., cube 3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.

PORTLAND STONE—
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cub. 4 4½
Do. do. delivered on road waggons at above stations, per ft. cube 4 5½
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

CHILMARK—RANDOM BLOCK—
At Nine Elms, per ft. cube 3 11

HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb. 14 0
Sawn two sides ..... " 22 6
Sawn three or four sides ..... " 27 6

YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... Per ft. super 5 6
6 in. rubbed two sides, ditto ..... " 6 0
3 in. sawn two sides slabs (random sizes) " 2 3½
2 in to 2½ in. sawn one side slabs (random sizes) ..... " 1 6½
1½ in. to 2 in. ditto ..... " 1 3½

HARD YORK—
Delivered at any Goods Station, London. s. 6 d. 3
Scappled random blocks ..... Per ft. cube 6 3
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super 5 1½
6 in. rubbed two sides, ditto ..... " 6 1½
4 in. sawn two sides slabs (random sizes) " 3 1½
3 in. ditto ditto " 2 8
2 in. self-faced random flags ..... Per yd. super 8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	3 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½ ...	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅜	16/-	1¼	25/-
½	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	27/6

MATCHING (BEST).

Inches.	per sq.
⅝	15/-
¾	16/6
1	20/-

ins.	BATTENS.	s.	d.
⅜×2	.....per 100 ft	2	0.

SAWN LATHS s. d.
Per bundle ... 2 3

1 INCH AND UP THICK.

Average price for prime quality.	£	s.	d.
Dry Austrian Wainscot, per ft. cube	0	15	0
Dry American and/or Japanese Figured Oak, per ft. cube	0	12	0
Dry American and/or Japanese plain Oak, per ft. cube	0	10	0
Dry sq. edged Honduras Mahogany, per ft. cube	0	14	0
Dry log-cut Honduras Mahogany, per ft. cube	0	16	0
Dry Cuba Mahogany, per ft. cube	1	1	0
Dry Teak, per ft. cube	0	14	0
Dry American Whitewood, per ft. cube	0	10	0
Best Scotch Glue, per cwt. ... £4 10 0 to	—		
Liquid Glue, per cwt.	4	7	0 to 5 10 0

SLATES.

First quality, slates from Bangor or Portmadoc carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£	s.	d.		£	s.	d.
24 by 12	30	0	0	18 by 10 ...	16	10	0
22 by 12	26	10	0	18 by 9 ...	14	12	6
22 by 11	24	10	0	16 by 10 ...	14	5	0
20 by 12	24	0	0	16 by 8 ...	11	0	0
20 by 10	20	2	6				

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London.

		£	s.	d.
Best machine-made tiles from Broseley or Staffordshire district		£4	10	0
ditto hand-made ditto		5	3	6
Ornamental ditto		5	8	6
Hip and valley tiles (per dozen)	Hand-made	0	9	6
	Machine-made	0	9	0

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

R.S. Joists, cut and fitted	£11	0	0
Plain Compound Girders	12	0	0
" " Stanchions	15	0	0
In Roof Work	18	0	0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	12	0	0	⅞ in. to ¼ in.	10	15	0
⅜ in.	11	0	0	⅝ in. to 2⅞ in.	10	10	0

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ⅛ in. to 6in. %	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ⅛in. to 6in. %	Standard Fittings Sizes ⅛in. to 6in. %	Standard Flanges Sizes ⅛in. to 6in. %
Gas	65	52½	57½	70
Water ...	61½	48½	52½	65
Steam ...	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	2½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Price ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/0½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.
O.G. GUTTERS.			
3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles,	Branches, stock angles.
2 in.	1/3¾	1/9	2/7
2½ in.	1/4½	2/-	3/1
3 in.	1/8½	2/6	3/9
3½ in.	2/1½	3/-	4/4
4 in.	2/5	3/7	5 3

Connections—50 per cent. off above prices.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe, angles, stock angles.		Bends, stock Branches.	
	s.	d.	s.	d.
2 in. per yd. in 6 fts.	1 11		1 6½	1 10½
2½ in. "	2 3½		1 8½	2 4
3 in. "	2 4½		1 10½	2 9½
3½ in. "	2 7		2 4	3 3
4 in. "	2 11		2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.			Bends, stock Branches.		
	s.	d.		s.	d.	s. d.
3 in. per yd. in 9 ft. lengths ...	3	4		4	3	6 8
	cwt.	qr.	lbs.			
4 in. "	1	1	20 ...	4	7	5 2 8 10
5 in. "	1	2	22 ...	6	0	9 0 14 3
6 in.	2	0	6 ...	6	6	10 11 18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London.					
IRON—	£	s.	d.		£	s. d.
Common bars	10	10	0	to	11	0 0
Staffordshire Crown Bars—Good merchant quality ...	10	15	0	to	11	10 0
Staffordshire Marked Bars	14	0	0	...	15	0 0
Mild Steel Bars	9	10	0	...	10	0 0
Steel Bars, Ferro-Concrete quality, basis price	8	0	0	...	9	0 0
Hoop iron, basis price	11	0	0	...	12	0 0
" Galvanised	27	0	0	...	28	0 0
Soft Steel Sheets, Black—						
Ordinary sizes, to 20 g.	11	0	0	...	11	10 0
" " " 24 g.	12	0	0	...	13	0 0
" " " 26 g.	14	0	0	...	15	0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	13	10	0	...	14	10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14	10	0	...	15	10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	17	10	0	...	18	10 0

No. 1 quality £4 per ton extra.

Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13	0	0	...	14	0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g. ...	14	10	0	...	15	10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16	10	0	...	17	10 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18	0	0	...	19	0 0
Best Soft Steel Sheets, 22 g. and 24 g.	20	0	0	...	22	0 0
Best Soft Steel Sheets, 26 g.	21	10	0	...	23	0 0
Cut Nails, 3 in. to 6 in.	15	0	0	...	16	0 0

(Under 3 in. usual trade extras.)

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s.	d.
Seamless Copper tubes (basis)	per lb.	0	9
Strong sheet	"	0	10
Thin	"	0	11
Copper nails	"	1	0
Copper wire	"	0	11

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/-	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH GRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps ...	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps ...	35/-	45/-	66/-	126/- "

TIN.—English Ingots, 1/8 per lb. SOLDER.—Plumber's 9d., Tinmen's 10d., Blowpipe 11d. per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(*contd.*).

LEAD, &c.

(Delivered in London.)	£	s.	d.
LEAD—Sheet, English, 4 lb. and up	21	0	0
Pipe in coils	21	10	0
Soil pipe	24	10	0
Compo pipe	25	0	0

NOTE.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes 5s. cwt. extra.

Old lead, ex London area, at Mills .....per ton } £11 0 0

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes	per gallon	0	1	9
" " " in barrels ...	" ...	0	1	11
" " " in drums ...	" ...	0	2	2
Boiled " " in barrels ...	" ...	0	2	3
" " " in drums	" ...	0	2	5
Turpentine, in barrels	" ...	0	5	6
" in drums (10 galls.)	" ...	0	5	8
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		47	0	0

Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

GENUINE WHITE LEAD PAINT.
"Father Thames." "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered £ 65 s. 0 d. 0

Red Lead, Dry (packages extra) ... per ton	34	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Size. XD quality .... fkn.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths	7½d.
15 " thirds ...	3½d.	32 " thirds	9½d.
21 " fourths ...	3½d.	Obscured Sheet, 15 oz. ...	3½d.
21 " thirds ...	4½d.	" " 21 oz. ...	4½d.
26 " fourths ...	4½d.	Fluted, 15 oz. 6½d., 21 oz.	9d.
26 " thirds ...	7½d.	Em'lld,15 oz. 4½d., 21 oz.	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES. Per ft.

Rolled plate ¼ in.	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	5½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot s.	d.
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2	6

VARNISHES, &c.

		Per gallon		
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Culrass Black Enamel		0	7	0

An Old Poplar Building.

An old public-house in Poplar High-street is to be converted by the Bethnal Green and East London Housing Association into four good flats. Each flat will have a living room, kitchen, two bedrooms, and a bathroom. It is stated that the public-house has been closely examined by the Society for the Protection of Ancient Buildings and is believed to date from the early sixteenth century. It possesses a beautifully carved stone Tudor fireplace and some oak panelling, and the architect, Mr. J. E. M. Macgregor, A.R.I.B.A., 20, Buckingham-street, W.C.2, hopes to expose a contemporary overhanging oak and plaster wall at the back.

NEW BUILDINGS IN SCOTLAND

The Editor would be glad to receive information for publication under this heading from architects, builders, or other persons concerned. Items should be received at THE BUILDER *Office not later than Wednesday morning.*

Aberdeen.—HOUSING.—Recommendations of the Finance (Property) Sub-Committee of the Finance Committee have approved an application on behalf of Messrs. John Bisset and Sons, Ltd., Aberdeen, to feu a portion of the lands of Seafield for housing.—The Sub-Committee had before them an application on behalf of Hazlehead Golf Club to lease a piece of ground at Hazlehead Golf Course for the purpose of erecting a club pavilion, and resolved to recommend that the piece of ground be exposed to let by public roup.

Aberdeen. — IMPROVEMENTS. — The Public Health Committee of the T.C., reviewing the question of reconstructing certain portions of the old home for nurses at the City Hospital, decided that the work should be carried out under the supervision of the superintendent of the town housing, Mr. A. B. Gardner.

Dundee.—BUILDINGS.—Plans and sections of the following proposed new buildings, etc., have been lodged at the office of the City Engineer:—Blackness-road, alterations for the Directors of the Dundee Industrial Schools Society, Messrs. Maclaren, Soutar and Salmond, architects, 15, South Tay-street; Claypots-road, cottage for Mr. A. Wood, Mr. W. B. D. Keith, architect, 10, Whitehall-street; Lawside-road, store for the Mother Superior and Sisters, Messrs. Allan and Friskin, architects, 26, Castle-street; Lochee-road, alterations for Messrs. A. and R. Lickley, Mr. Joseph Johnston, architect, 32, Bank-street; Perth-road, shops for Messrs. James Lowe and Co.; Provost-road, control house, etc., for the Dundee Football Club, Ltd., Messrs. Maclaren, Soutar and Salmond, architects; Strathmartine-road, alterations for the Directors of Dundee Industrial Schools Society, Messrs. Maclaren, Soutar and Salmon, architects; Strathmore-avenue, alterations for City of Dundee Territorial Association, Messrs. Allan and Friskin, architects, 26, Castle-street; Tullideph-road, hall for the Order of Franciscans, Mr. R. Fairlie, architect, 7, Ainslie-place, Edinburgh.

Edinburgh.—BUILDINGS.—Among the petitions granted by the Edinburgh Dean of Guild Court was one by Messrs. A. Cowan and Sons, Ltd., for the rebuilding of the part of the Craigside Envelope Works. The cost of the reconstruction is estimated at £10,000. The following warrants were also granted:—Donaldson and Low—eleven bungalows at Redford-avenue, and four bungalows at Redford-crescent, Colinton; T. Sutherland Henderson—five bungalows at March-road, Blackhall; A. Richardson Knox—sixteen flatted houses at Grange-terrace; The City—public convenience at North Castle Wynd; R. J. Robinson, Jr.—six bungalows and two double bungalows at east side of Greenbank-road, six bungalows and two double bungalows at west side of Greenbank-road.

Glasgow.—HOUSES.—The T.C. are inviting tenders for rehousing at Calton (3rd section). Areas Nos. 6-7 for 66 houses.

Grangemouth.—HOUSING.—The erection of a scheme of 140 houses by the Town Council at a cost of nearly £50,000 has been sanctioned by the Dean of Guild Court. The Burgh Engineer reported that the 140 houses would be built of brick and roughcast, with slated roofs, while two new streets would be constructed in the area.

Newtown, Bo'ness.—HOUSES.—For the erection of 92 houses at Newtown, Bo'ness, for the West Lothian C.C.; tenders are being invited by Mr. A. M Smith, sanitary inspector, Linlithgow.

North Berwick. — BUILDING. — The East Lothian C.C. has received the Secretary of State for Scotland's final approval for the erection of the new police station at North Berwick, at the cost of £4,316 6s. 6d.

NEW COMPANIES

The particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies' Registry.

GLEESON DEVELOPMENT CO., LTD. (267,957). Registered August 25. Dorhurst, Dormans Park, East Grinstead. Builders and contractors, etc. Nominal capital, £100.

FORUM (ROMFORD), LTD. (267,956). Registered August 25. 65, Wanstead Park-avenue, Manor Park. Builders, etc. Nominal capital, £1,000.

JACKSON BROS. (BULWELL), LTD. (268,028). Registered August 27. Stone masons. At Milton-street, Bulwell. Nominal capital, £10,000.

HEWITT & PIKE, LTD. (267,991). Registered August 26. Public works contractors, etc. Nominal capital, £1,500. J. Hewitt, 12, Blackett-avenue, Norton-on-Tees, Stockton-on-Tees.

HARVEY & QUELCH, LTD. (268,265). Registered September 6. 216, High-street, Slough. Builders and contractors. Nominal capital, £700.

OSNABURGH PROPERTIES, LTD. (268,199). Registered September 2. Builders and contractors, etc. Nominal capital, £100. Edith M. Plummer, 15, Spondon-road, Broad-lane, N.15.

WEST SURREY JOINERY CO., LTD. (268,172). Registered September 1. Joiners and carpenters. At West End, Chobham. Nominal capital, £1,000.

DANIELS (MANCHESTER), LTD. (268,143). Registered September 1. 98, Harley-street, Higher Openshaw, Manchester. Masons, etc. Nominal capital, £100.

T. PICKERING, LTD. (268,165). Registered September 1. 34, Great Wilson-street, Leeds. Joiners, cabinet makers, etc. Nominal capital, £500.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. It should be noted that plasterers and painters who are not parties to the Scottish N.J.C. pay higher wages of 1d. and ½d. per hour extra respectively. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A^1	A^2	A^3	B	B^1	B^2	B^3
Craftsmen	1/6½	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1¼	1/0¾	1/0½	1/–	/11¾	/11½

Aberdeen	A	Dundee	A	Hawick	A^2
Airdrie	A	Dunfermline	A	Helensburgh	A
Alexandria	A	Dunoon	A	Inverness	B
Arbroath	A^2	East Lothian	A	Kilmarnock	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A^2
Bathgate	A	Falkirk	A	Kinross-shire	A
Bo'ness	A	Forfarshire	A^2	Kirkcaldy	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A
Clackmannanshire	A	Galashiels	A^2	Leith	A
Coatbridge	A	Glasgow	A	Midlothian	A
Dumbartonshire	A	Greenock	A	Motherwell	A
Dumfries	A^2	Hamilton	A	Peeblesshire	A^2
Dumfriesshire	A^2				

Perth	A		
Perthshire	A_2		
Peterhead	A		
Renfrewshire	A		
Rothesay	A		
Roxburghshire	A^2		
St. Andrews	A		
Selkirkshire	A		
Stirling	A		
Stirlingshire, West	A^2		
West Lothian	A		
Wishaw	A		

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 700.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	„ „	1	0
Add for every additional depth of 6 ft.	„ „	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	„ „	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	„ „	6	0
Add if in floors 6 in. thick	„ „	2	6
Add if in beams	„ „	3	0
Add if aggregate 1 : 2 : 4	„ „	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	„ „	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	„	7	10	0
Add if in Staffordshire blues	„	22	0	0
Add if in Portland cement and sand	„	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

Neat flat struck or weathered joint	„ „	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	„ „	0	0	10
Axed in stocks	„ „	0	0	9
Rubbed and gauged jointed in putty camber or segmental	„ „	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	„ „	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	„ „	9	6
Three-quarter-inch on flats in two thicknesses	„ „	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	„ „	1	0

MASON.

York stone templates fixed	per foot cube	13	0	
York stone sills fixed	„ „	22	0	
Bath stone and all labour fixed	„ „	10	6	
Beer stone and all labour fixed	„ „	15	0	
Portland stone fixed	„ „	20	0	
Chilmark stone fixed complete	„ „	17	6	

SLATER.

Welsh 16in. × 8 in. 3 in. lap, including nails	per square	72	9	
Do. 20in. × 10 in. Do. Do.	„	80	9	
Do. 24in. × 12in. Do. Do.	„	90	0	

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	3	
Do. joists	„ „	4	9	
Do. roofs, floors and partitions	„ „	5	3	
Do. trusses	„ „	7	9	

	¾″	1″	1¼″	2″
Deal rough close boarding per sq.	33/6	38/–	43/–	70/–

Flat centering for concrete floor, including struts or hangers	„	50	0	
Do. to beams	per ft. sup.	0	9	
Centre for arches	„	1	6	
Gutter boards and bearers	„	1	0	

FLOORING.

	¾″	1″	1¼″	1½″
Deal-edges shot per sq.	—	42/6	50/–	57/6
Do. tongued and grooved „	—	47/–	56/–	64/–
Do. matchings „	44/–	49/–	—	—
Moulded skirting, including backings and grounds per ft. sup.	1/6	1/9	2/–	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	„ „	2	1
Add for fitting and fixing	„ „	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size		3	9

DOORS.

	1½″	1¾″	2″
Two-panel square framed per ft. sup.	2/1	2/3	2/5
Four-panel Do. „	2/4	2/6	2/9
Two-panel moulded both sides „	2/6	2/9	2/11
Four-panel Do. Do. „	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

	1″	1¼″	1½″
Plain deal jamb linings framed per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers „	1/4	1/6	1/9
Add if cross-tongued „	2d.	2d.	2d.

STAIRCASES.

	1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/–	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in	per ft. run	0	9
Mahogany handrail, average, 3 in. x 3 in.	„ „	6	0
Add if ramped	„ „	12	0
Add if wreathed	„ „	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/–
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/–
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	„	18	0
Do. stanchions	„	20	9
In roofwork	„	26	6

RAIN-WATER GOODS.

	3″	4″	5″	6″
Half-round plain rebated joints ...ft. run	1/4	1/7	1/9	2/–
Ogee Do. Do. „	1/6	1/9	2/3	2/9
Rain-water pipes with ears „	1/6	2/4	—	—
Extra for shoes and bends each	3/4	4/11	—	—
Do. stopped ends „	1/6	1/10	2/9	3/3
Do. nozzles for inlets „	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. flats	„	39	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	„ „	1	3
Copper nailing	„ „	0	3

	½″	¾″	1″	1½″	2″	4″
Drawn lead waste per ft. run	1/1	1/7	1/10	3/–	3/6	—
Do. service „	1/6	2/–	2/5	3/6	—	—
Do. soil „	—	—	—	—	—	6/–
Bends in lead pipe each	—	—	—	—	3/–	6/6
Soldered stop ends „	1/–	1/4	1/9	2/6	3/2	—
Red lead joints ... „	11d.	1/–	1/3	1/11	2/4	4/10
Wiped soldered joints „	2/6	3/–	3/6	4/4	5/6	7/9
Lead traps and cleaning screws „	—	—	—	12/7	17/6	—
Bib cocks and joints „	6/4	9/7	15/4	41/–	—	—
Stop cocks and joints „	15/4	17/2	25/8	64/–	—	—

PLASTERER.

				s.	d.
Render, float and set in lime and hair		per yard sup.		2	3
Do. Do.	Sirapite	„	„	2	6
Do. Do.	Keen's	„	„	3	6
Add saw lathing		„	„	1	7
Add metal lathing		„	„	2	6
(Not including hangers or runners, etc., for suspended ceilings.)					
Portland cement screed		„	„	2	2
Do. plain face		„	„	3	3
Mouldings in plaster		per 1 girth		0	1
One-and-a-half granolithic pavings		per yard sup.		5	3½

GLAZIER.

21-oz. sheet plain	per foot sup.	0	6½	
26-oz. Do.	„ „	0	7½	
Obscured sheet	„ „	0	8	
⅛-in. rolled plate	„ „	0	8	
¼-in. rough rolled or cast plate	„ „	0	7½	
¼-in. wired cast plate	„ „	1	1	

PAINTER.

Preparing and distempering, 2 coats	per yard sup.	0	9	
Knotting and priming	„ „	0	7	
Plain painting, 1 coat	„ „	0	9	
Do. 2 coats	„ „	1	2	
Do. 3 coats	„ „	1	9	
Do. 4 coats	„ „	2	4	
Graining	„ „	2	3	
Varnishing twice	„ „	1	9	
Sizing	„ „	0	3	
Flatting	„ „	0	7	
Enamel	„ „	1	1	
Wax polishing	per foot sup.	0	6	
French polishing	„ „	1	2	
Preparing for and hanging paper	per piece.	2/– to 4/–		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

TRADE NEWS

British Commercial Cars for Belgium.

Amongst the orders received by Morris Commercial Cars, Ltd., recently is one for twenty-two vehicles from Antwerp, Belgium. The models ordered are of 2-ton and 30-cwt. capacity, and will be used for goods service by firms who have already experienced the value of British vehicles. Other orders for Morris-Commercials have been received from the Irish Free State and Holland.

Louvres.

Steel Ceilings, Ltd., issue from 17, Victoria-street, S.W.1, a booklet dealing with their "Monsoon" louvres and the advantages which this type of window possesses for certain classes of buildings. The "Monsoon" system, we learn, achieves maximum air-passage, yet is weather-proof under even the worst conditions. Architects should be interested in this design, and can obtain a copy of the descriptive brochure on request.

The Ford Motor Exhibition.

An important announcement was made on the opening days of the Ford Motor Exhibition at the White City by Mr. A. Hall, sales manager, who stated that price reductions were to take effect forthwith on all Ford and Fordson commercial vehicles of 1 ton, 30 cwt., and 2 tons capacity. These reductions vary between £10 and £20 per vehicle. The show has been remarkable for the number of prominent men in the motor industry who have already visited the White City and shown considerable interest in the exhibits. The exhibition closes on October 22.

A New Shockproof Switch.

We have received from Messrs. J. H. Tucker and Co., Ltd., a sample of their new "Spartan" shockproof switch. This is one of the new lines the firm are introducing, and the switch, mounted on a showcard, is being mailed in this form to the trade. Full details of its construction and outstanding points are contained in a "Spartan" folder, which those interested may obtain. The switch is worth inspection, as the action is simplified, strong, good looking, and, from its construction, is stated to be shockproof.

"Electricity in Modern Buildings."

Under this title, the General Electric Co., Ltd., have issued a well-prepared little brochure, in which electricity's application to and installation in the modern building is dealt with. The brochure has particular reference to the G.E.C. Stand at the Building Exhibition, where every use for electricity in a building—air heating, power, ventilation, cooking, water heating, wiring systems, light, cleaning and communication—is demonstrated and apparatus displayed. A useful little publication.

"The Modern Brick Fireplace."

Messrs. Wheatly and Company, of the Springfield Tileries, Newcastle, Staffs, have issued, under the above title, a new booklet which gives illustrations and prices of six fireplaces specially designed for the use of this company's bricquettes. All six have been designed by Mr. Morrall Maddox, A.R.I.B.A., and appear to be excellent examples of their kind. Architects who have not yet seen this issue should make application for it, and also ask for an illustration in colour of Messrs. Wheatly's new "brown" quarries. The colour of these quarries vary, but when laid they blend together and form, we should judge, an exceptionally attractive floor.

Norfolk Reed Thatching.

For the benefit of those who were not able to see the interesting demonstration of Norfolk reed thatching at Olympia, by Messrs. R. W. Farman, of North Walsham, Norfolk, a folder has been issued, containing details of modern applications of this ancient craft. For country houses, pavilions, boathouses, bungalows, etc., thatching is an ideal form of roofing, as it is fire-resisting, insulative to both heat and cold, and gives many years' service. There are, we believe, many instances of reed-thatch lasting in good condition for a century. The same folder illustrates many examples of osier work; chairs, summer-houses, tables and hurdles being some of the many applications.

A New Gas-operated Refrigerator.

A small gas-operated refrigerator has just been placed on the market, designed to cost only 1d. to 1½d. for every 24 hours of use. Standing on its own legs, it occupies very little kitchen space—or it may even be hung on the wall. It has no moving parts, makes no noise, and has nothing in it to go wrong. A tiny gas jet operates it. Full particulars of this invention, the "Freezolux," together with some interesting information on the design and lay-out of the modern labour-saving kitchen, are contained in the current issue (No. 222) of "A Thousand and One Uses for Gas." The photographs of ultra-modern kitchens should interest architects, builders and property owners. A copy can be obtained free of charge from the General Secretary, the British Commercial Gas Association, 28, Grosvenor-gardens, S.W.1.

An Interesting Concrete Mixer.

Messrs. Goodwin, Barsby and Co., Ltd., of Leicester, have just completed to the order of the Crown Agents for the Colonies for use abroad a 7/5 open-drum concrete mixer with builder's hoist. The P.W. Department, for whom the machine is intended, are constructing a large subterranean reservoir, and the machine is to be used for concreting the interior. The special feature of the mixer is that it has been built so that it may be dismantled and carried in small pieces through a narrow passage leading to the reservoir. The machine has for power unit a "Lister" hopper cooled petrol engine which drives on to a countershaft. This countershaft not only rotates the mixing drum, but also serves to drive the hoist and hoisting gear of the side loader. A ratchet safety gear is fitted to the builder's hoist, which is operated by a single handle conveniently placed. The side-loading hopper is prevented from overwinding by an automatic knock-out gear. A measuring water tank is also fitted with a discharge pipe leading direct into the drum in its loading position.

Southwell Minster "Snuffers."

Southwell Minster is to lose its "Snuffers," or spires. The Ecclesiastical Commissioners have ordered the spires on the western towers to be removed as the lead is full of holes, and is admitting water to the towers. It has now to be decided how the towers are to be finished off. The spires have no antiquity to commend them, as it is only about half a century since they were erected.

Empire Timbers.

In a lecture before the Timber Trades Technical Education Committee on the present position of Empire timbers in the British market and the measures necessary to develop their use, Dr. S. E. Chandler, secretary to the Advisory Committee on Timbers, Imperial Institute, pointed out that of the 500,000,000 cubic feet of unmanufactured timber required by industries in this country annually, only 6 per cent. was home-grown. In hardwoods, of which Britain imported about 86 per cent. of its supplies, the position was more satisfactory from an Imperial standpoint, the proportion from Empire sources being about 25 per cent. In his conclusions, Dr. Chandler urged that the demand for Empire timbers, initiated during the War, might be carefully cultivated and supported by propaganda until it became a more definite factor in the trade. The time had come for the commercial and business aspects of the question to be gone into more closely than had been feasible before. There appeared to be a genuine desire on the part of users and producers alike for established and universally accepted grading rules applicable to Empire hardwoods.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office.*

Aberdeen.—Shop, etc., in Victoria-road, Torry, for the Northern Co-operative Society, Ltd. Messrs. Tawse & Allan, architects, Bon Accord-square:—
Mason and brick—*A. Birnie, 10, Claremont-street.
Plumber—*J. Deen, 22, Queen-street.
Drainage scheme and excavation—*J. Leithen, Froghill-road.
Plaster, tile and concrete—*J. Scott & Sons, 485, Union-street.
Joinery, carpentry and ironmongery—*A. Hale & Son, 10, Mid Stockit-street.
(All of Aberdeen.)

Accrington.—Electrical installation at the grammar school, for the E.C. Mr. H. Sanderson, Borough Surveyor:—
*G. V. Stephenson & Sons, Accrington.

Audenshaw.—61 houses off Droylesden-road and Kershaw-lane. Mr. Peter Cummings, A.R.I.B.A., architect, 27, King-street West, Manchester:—
*Heaton Park Estate Co., Ltd., Manchester.

Audenshaw.—42 houses and laying out of Audenshaw Hall estate:—
*W. T. Crossman, Ashton-under-Lyne.

Bacup.—Supplying and fixing heating installation at Acre Mill branch, for the Co-operative Store, Ltd.:—
*R. Wood & Sons, Bacup.

Basford.—18 non-parlour houses on the Cliffe-boulevard site at Kimberley, for the R.D.C.:—
*F. Sisson & Sons, Cromford-road.
Langley Mill £5,015

Beverley.—Painter work to 42 houses now in course of erection at Cherry Tree-lane, for the T.C. Mr. J. Dennett, Town Clerk:—
*Fred Richardson, Beverley £263

Birmingham.—Shopfront at 40, High-street:—
*A. Edmonds & Co., Ltd., Constitution Hill, Birmingham, 19.

Birmingham.—Shops and flats in Stratford-road, Hall Green. Messrs. Harford, Kingham & Nock, architects, 117, Colmore-row, Birmingham:—
*Wragg Bros., Ltd., Solihull.

Birmingham.—Alterations and improvements to business premises at the corner of the Arcade and Temple-row:—
*W. C. Skinner, Birchfield, Birmingham.

Birmingham.—Garages and flats in Oxford-road, Moseley. Mr. C. S. Underhill, F.R.I.B.A., architect, 33, New Hall-street:—
*Maddocks & Walford, Tyburn-road, Erdington.

Birmingham.—Factory at the rear of premises opposite Alcester-street, Digbeth:—
*J. Moffatt & Sons, South-road, Camp Hill, Birmingham.

Birmingham.—Block of retail shops in Wake Green-road, Moseley. Mr. A. A. Howard, architect, 25, Bennitts-hill, Birmingham:—
*W. S. Walker, Olton-road, Shirley.

Birmingham.—New church of SS. Joseph and Helen, King's Norton, for the Rev. R. J. Ashforth, 84, Northfield-road, King's Norton. Mr. G. B. Cox, F.R.I.B.A., architect, 109, Colmore-row:—
*J. & A. Brazier, Ltd., Bromsgrove.
(Estimated cost, £10,000.)

Bolton.—Alterations to St. Andrew's Church, Bowker's-row, for the Council of the Church of England Presbyterian Churches. Messrs. Bradshaw Gass & Hope, FF.R.I.B.A., architects, 19, Silverwell-street:—
*R. T. Tyson, Bolton.

Bootle.—New weighbridge pit and office in Town Hall Yard, Trinity-road, for the C.B. Borough Engineer:—
*W. A. Gale, Ltd., Linacre-lane, Bootle £108

Bootle.—37 houses in pairs and terraces between Fernhill-road and extending to Southport-road, along frontage of proposed road No. 1 on housing site No. 12, known as Caddick's field; and 20 houses in pairs at rear of houses at junction of Bailey-drive and Orrell-lane, and on north of Park-lane and south of Patrick-avenue, for the C.B. Borough Engineer and Surveyor:—
37 houses—
‡Lloyd & Cross, Ltd., 57, Hamilton-square, Birkenhead £11,283 10
20 houses—
‡J. Jones & Sons (Woolton), Ltd., Woolton 6,972 0

Bootle.—Cleaning and painting of the canal bridges in Litherland-road, Stanley-road and Linacre-lane, for the T.C.:—

*A. Allsop & Co., Bootle £144 15

Brentwood.—Additions to the nurses' home at Mental Hospital, for the Essex C.C.:—

*Hosking & Son £9,570

Bridlington.—Engine house, for the T.C. Mr. B. Newton, Borough Architect:—

*W. Birch & Sons, York.

Bury.—68 cubicles on balcony of the first-class plunge baths at St. Mary's-place, for the Corporation. Mr. J. Chadwick, Borough Surveyor:—

*Spencer & Clarke, Ltd., Bury.

Carstairs.—Houses, for the Lanarkshire C.C. Mr. Peter Smith, architect, Clydesdale-street, Hamilton:—

Excavation, brick and mason—*Bryce & Symington, 22, Kirkton-street, Carlake.
Plumber—*Duncan Johnstone, 25, Waterside-street, Strathavon.
Painter—*J. Kemp & Son, 110, Brandon-street, Motherwell.
Slater—*J. Wallace & Sons, Muirhead, Chryston.
Joinery, carpentry and ironmongery — *W. Chambers & Sons, Ltd., Fenington Station, Motherwell.
Plaster—*T. Lithgow & Co., Farrowflat, Lanark.
Electric lighting—*D. Henderson, 80, Great Western-road, Glasgow, W.C.

Castlerobin.—School at Castlerobin, near Belfast, for the Lisburn and Belfast Regional E.C.:—

*Sloan Bros., Carryduff, Belfast.

Chatham.—Rebuilding the "White Swan" public-house, for Messrs. Style & Winch, Ltd., Medway Brewery, Maidstone:—

C. Skinner, Ltd., Chatham	£5,940
G. Gates, Rochester	5,877
Durrant & Co., Rochester	5,741
*N. West, Strood	5,543

Darlington.—Addition to the grammar school, for the E.C. E. Minors, Borough Surveyor:—

‡W. Sanders Hutton, Ltd., Post Office, Wynd, Darlington.

Depwade.—104 cottages in 25 parishes, for the R.D.C. F. H. Bowden, Long Stratton:—

†Structural Contractors, Ltd., Westminster	£19,632
†Universal Housing, Ltd., Rickmansworth	2,965
†H. Bidewell, Wymondham	3,972
†S. C. Osborne, Riss	3,442

Dewsbury.—32 houses at Lees Holm, Thornhill Lees, for the C.B. Mr. T. Blakeley, A.R.I.B.A., Borough Architect and Surveyor. Quantities by the Borough Architect:—

Mason—*J. Donovan.
Joiner—*Wortley & Boothroyd, Ravensthorpe.
Slater—*W. R. Thompson & Co.
Plumber—*J. A. Schorah, Ltd., Ravensthorpe.
Plasterer—*J. Gill, Batley.
Painter—*E. Whittleston, Earlsheaton.
(Remainder of Dewsbury.)

Driffield.—Six non-parlour houses, for the R.D.C.:—

*— Southwick, Cranswick.

Dumbarton.—New sea wall, for the Dumbartonshire C.C. Mr. Jas. Andrews, County Surveyor, County-buildings, Dumbarton:—

Excavation, concrete and building works—
*Houston & Young, Bearsden.

Ealing.—Church and hall for Rev. H. G. Hoare, Ruislip-road:—

*C. W. B. Simmonds, Ltd., 75, Shoot-up Hill, Cricklewood, N.W.2.

Ealing.—Alterations to 51, New Broadway, Uxbridge-road, for London Scottish Cakes, Ltd.:—

*W. Ball & Sons (Highbury), Ltd., 64, Drayton-park, Highbury, N.5.

Ealing.—New fire station, comprising engine house block, tower, repair shop and quarters for officers and men, for the T.C. Mr. W. R. Hicks, Borough Engineer:—

W. J. Marston & Son, Fulham	£33,998
Chessums, Ltd., Tottenham	32,593
Buckingham & Sons, St. John's Wood	32,290
London Construction Co., Ltd., Hammersmith	31,775
T. Millman, Ltd., Ealing	31,438
Brown & Middleton, Ealing	31,265
S. E. Moss & Sons, Chelmsford	31,000
Walden & Co., Henley	30,610
S. F. Taylor, Ealing	30,550
W. H. Cooper & Son, Hammersmith	30,388
W. S. Try, Uxbridge	30,105
Hawkins & Co., Norwood	29,600
W. Moss & Sons, Ltd., Cricklewood	29,598
G. Moss & Sons, Ltd., Northolt	29,468
F. Liley & Sons, Croydon	29,250
Hall, Beddall & Co., Ltd., London	29,200
J. & R. Thompson (London), Ltd., Acton	28,997
Perrys (Ealing), Ltd., Ealing	28,732
Wilson, Lovatt & Sons, Ltd., Westminster	28,710
F. D. Hidden & Co., Ltd., Brentford	28,599
W. J. Dickens, Ealing	28,500
H. & J. Taylor, Lewisham	28,446
Evan Thomas & Son, Hanwell	27,958
*A. & B. Hanson, Ltd., Southall	27,200

Evesham.—Additions to the poor law institute, for the Worcestershire C.C. Mr. A. V. Rowe, County Architect, 38, Foregate-street, Worcester:—

*Espley & Co., Ltd., 77, High-street, Evesham £8,298

Ewell.—New road and sewers in Chadacre-road, Ewell, for the Clandon Trust, Ltd. Messrs. Atkinson & Martin, surveyors, Ewell. Mr. E. Russell, P.A.S.I., quantity surveyor:—

W. & C. French, Ltd.	£6,552
G. E. Wallis & Sons, Ltd.	6,289
Howard Farrow, Ltd.	5,817
John Mowlem & Co., Ltd.	5,796
W. H. Wheeler & Co., Ltd.	5,776
R. Costain & Sons, Ltd.	5,741
Willmont Bros.	5,488
Bridgwater Bros.	5,227
G. Wimpey & Co., Ltd.	5,085
*John Crook & Sons, Ltd.	5,058

Falkirk.—118 houses at Merthieston, for the Corporation. Mr. W. Gibson, Burgh Architect:—

Excavation, brick and mason—
*J. Murdoch & Co. £11,191
Painter—
J. Marshall, 36, West Bridge-street 783
Roughcasting—
*D. McNair, The Garrison 889
Slater—
*J. Westland, Union-road, Camelon ... 1,918
Joinery, carpentry and ironmongery—
*R. Bennie, Wright Works 7,669
Glazing—
*D. O'May, Ltd., Chapel-lane 362
Plumber—
*R. Brown, Baxter Wyard 5,932
Plaster—
*David McNair, The Garrison 3,557
(All of Falkirk.)

Fallings Heath.—Small sanitary convenience in the cemetery, for the Wednesbury T.C. Mr. A. Booth, Borough Engineer and Surveyor:—

*Thomas Twigg & Co., Ocker-hill, Tipton £290

Glasgow.—Reconstruction and additions to premises in Burnside-street, for Glasgow District of the Loyal Order of Ancient Shepherds. Messrs. Balfour & Stewart, architects, 110, Blytheswood-street:—

Building—*G. McCallum, 112, Commerce-street, Glasgow.
Joinery work—*G. Eaglesham, 22, Brownloan-road Govan.

¶Gosport.—Heating scheme (2nd contract) at Gosport, for H.M. Air Ministry:—

*Norris Warming Co., Ltd., 11-12, St. Andrew's-hill, E.C.4.

Greenock.—Tennis pavilion in Ardgowan-square, for the Ardgowan Bowling Greens and Tennis Courts:—

*Matthew Kirkwood & Co., Risten-street Works, Glebe, Greenock.

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Hamilton.—Works at new Catholic school, Cadzow area, for the Lanarkshire C.C. Mr. John Stewart, architect, Albert-street, Motherwell:—

Heating installation—
*Works Department, Albert-street, Motherwell £1,033 6 8
Electric light installation—
*W. McAdam, 46, Campbell-street, Hamilton 160 11 6

Hull.—First portion of the elementary school in Maybury-road, for the E.C.:—

‡W. J. Simms, Sons & Cooke, Ltd., Nottingham £11,314

Hull.—First portion of the elementary school in Pickering-road, for the T.C.:—

Markwell, Holmes & Hayter, Ltd., Hull £11,100
‡G. H. Panton & Sons, Ltd., Hull ... 10,989

Hull.—Substation at Saner, for the T.C.:—

*R. Cleminshaw £1,317 18 3

Ipswich.—Extension of the hospital, for the T.C. Messrs. Cautley & Barefoot, AA.R.I.B.A., architects, The Thorofare, Ipswich. Quantities by Mr. R. J. Girling, Felixstowe:—

Page & Co., Ipswich	£39,520
Rogers Bros., Felixstowe	38,992
R. Bennett & Snare, Ltd., Ipswich	38,749
Cubitt & Gotts, Ltd., Ipswich	33,798
A. S. Green, Ipswich	36,763
C. A. Green & Sons, Ltd., Ipswich	36,421
Sadler & Sons, Ipswich	36,263
G. A. Kenney & Sons, Ipswich	36,250
J. Noller, Ipswich	36,192
Wm. C. Reade, Aldeburgh	35,847
Gower & Robinson, Ipswich	35,770
*V. A. Marriott, Ltd., Ipswich	34,650

Ireland.—The following contracts have been placed by the Commissioners of Public Works:—

Bray Garda Siochana Station, Co. Wicklow—alterations and repairs—*G. Byrne, 14, Brennan-parade, Bray.
Castle Carrageen Moss-Curing Station, Co. Galway — extension — *R. Macdonald, Galway.
Cregmore National School, Co. Galway—erection of school—*Hosty & Meeneghan, Ballinrobe.
Kanturk National School, Co. Cork—erection of school—*T. Fitzpatrick, Kilmihill.
Kilmacoo National School, Co. Wicklow—erection of school—*T. Reynolds, Drumrahill, Mohill.
Latherdane National School, Co. Mayo—erection of school—*Glynn & Tobin, Ballina.
McKee Barracks, Dublin—electric lighting—*Maguire & Gatchell, Ltd.
Naomh Buadain National School, Co. Donegal—erection of school—*J. Kelly, Carndonagh.
16 and 17, Parliament-street, Dublin—demolition work—*Owen Smith, St. Alban's-road, Dublin.
Dublin Castle and Ship-street Buildings—external painting—*Switzer & Co., Ltd., Dublin.
Hackballscross Garda Station, Co. Louth—erection of station—*Owen Carroll, Dundalk.
Hibernian Military School, Dublin—adaptation as a preparatory college—*A. Hull & Co., Ltd., Dublin.
Longmeadows Relief Works—gates and railings—*City of Dublin Engineering Works, Dublin.
Rathmines Post Office—levelling site and preparing foundations — *Fearon & Co., Ranelagh.
Rathmines Post Office—steel structure—*City of Dublin Enginering Works.
Waterford Model School—adaptations—*R. B. Nolan, Waterford.

Leamington Spa.—Paying-patients' block at the Warneford Hospital, Radford-road, for the Board of Management. Messrs. Armstrong & Gardner, architects, 39, High-street, Warwick:—

Builders—*Foster & Dicksee, James-street, Rugby £4,377
Fireproof floors—*Siegwart Fireproof Co., Ltd., London, W.C.2.
Asphalte—*Standard Flat Asphalte Roofing Co., London, E.15.
Patent glazing, steel casements—*Williams & Williams, Ltd., Reliance Works, Chester.
Electric light — *Midland Electric Light and Power Co., Ltd., Leamington Spa.
Electric lifts—*H. Morris, Ltd., Loughborough.

Linlithgow.—12 houses at Captain's Park, Prestonroad, Linlithgow, for the T.C. Mr. W. Scott, architect, Linlithgow:—

Brickwork—			
*J. Malone, Linlithgow	£1,426	16	0
Joiner work—			
*W. C. Forsyth, Bathgate	874	8	1
Slater and harling—			
*G. Riddell, Ltd., Edinburgh	708	16	0
Plaster and cement—			
*G. M. Paris, Broxburn	310	5	0
Plumber work—			
*J. Hodge, Linlithgow	363	4	9
Painter work—			
*D. Grant & Sons, Linlithgow	77	1	7

Liverpool.—For works on the new tunnel, for the Mersey Tunnel Joint Committee:—

Steelwork of six ventilation buildings—
*Redpath, Brown & Co., Ltd., Liverpool £119,551

General building work of the North John-street ventilation station—
*William Moss & Sons, Liverpool ... 102,897

Construction of Birkenhead entrance to the tunnel at Chester-street—
*Sir R. McAlpine & Sons 26,090

Liverpool.—Alterations to premises 78 & 80, Vauxhall-road, for the Transport and General Workers' Union, 37, Drury-lane:—
*A. Benson & Co., Liverpool.

Liverpool.—Alterations to offices, 144, Islington, for the Liverpool Victoria Insurance Offices:—
*Brown & Backhouse, Liverpool.

Liverpool.—Waiting room in Upper Park-street, for the Committee of the Liverpool Dispensaries:—
*Collin & Son, Ltd., Liverpool

¶London.—Tenders accepted by H.M.O.W. for the week ended October 13:—

Basingstoke Post Office Garage—erection—G. W. Oliver & Sons, Flaxpool-yard, Basingstoke.
Edinburgh, General Register House—painting—A. B. Williamson, 5, Coates-place, West End, Edinburgh.
Chelston Telephone Exchange—erection—Willcocks & Barnes, Lower Polsham-road, Paignton.
Teddington, National Physical Laboratory—heating, etc.—W. N. Mann & Co., 335, Cheriton-road, Folkestone.
Harrow, H.M. Stationery Office—painting—W. Chappell & Co., Ltd., 243, Elgin-avenue, W.9.
Glasgow, Hope-street Post Office—additions—J. Stevenson, 93, Pitt-street, Glasgow, C.2.

¶London.—The following works contracts have been placed by the War Office during the week ended October 13:—

Aldershot—erection of regimental institute—G. Kemp Stroud & Co., Ltd., Aldershot.
Aberdeen—erection of depot barracks—W. Tawse, Ltd., Aberdeen.

London.—Demolition of 99 and 100, Upper Thames-street and 2, Old Swan-lane for the purpose of widening the thoroughfare, for the City Corporation:—

F. J. Howard	£240	0	0
Goodman Price, Ltd.	215	0	0
Greenham Demolition Co., Ltd.	203	10	0
*W. R. Hargrave & Sons	184	9	6

London.—Cleaning and repainting of Chelsea Bridge, for the L.C.C.:—

Pitts, Ltd.	£2,304	3	9
L. Kazak, Ltd., Paddington	1,989	14	10
E. J. Butler, Newton Abbot	1,982	9	3
Edward Proctor & Sons	1,737	0	0
W. G. Beaumont and Son	1,580	14	9
F. Troy & Co., Ltd.	1,508	5	2½
R. Skevington & Sons, Derby	1,454	12	0
John Wright & Son (Blackwall), Ltd.	1,435	12	6
C. & T. Painters, Ltd.	1,261	2	3
*J. Robb & Son, Ltd., 50, Portland-road, Newcastle-on-Tyne	1,100	0	2
Chief Engineer's estimate (Remainder of London.)	1,576	2	3

London.—Installation of heating and hot-water supply apparatus, etc., in the female ward block at St. Mary Abbots Hospital, Kensington, for the L.C.C.:—

Buckley's (London), Ltd.	£3,417
J. & F. May	2,855
Young, Austen & Young	2,436
R. H. & J. Pearson, Ltd.	2,388
William Freer, Ltd.	2,198
Saunders & Taylor, Ltd.	2,197
The Brightside Foundry & Engineering Co., Ltd.	2,114
*Clark, Hunt & Co., Ltd., 159-161, Shoreditch High-street, E.1	2,098
Chief Engineer's estimate (All of London.)	2,695

London.—Internal and external cleaning and painting and repairs at St. Charles' Hospital, Ladbroke-grove, for the L.C.C.:—

J. Hocking & Co.	£5,547
Walter Rands	5,039
R. Woollaston & Co.	5,000
E. Christian & A. Sinclair	4,991
F. J. Tollit	4,985
Moffat Bros.	4,897
T. C. Randall & Son, Ltd.	4,870
F. Troy & Co., Ltd.	4,826
Decra, Ltd., Acton	4,800
Sykes & Son, Ltd.	4,697
Chas. Berger	4,495
Edward Proctor & Sons	4,182
Lilly & Sons, Ltd.	4,127
*L. Kazak, Ltd., 14, Bathurst-street, Paddington, W.2	3,983
Arthur H. Inns, Ltd.	3,837
Chief Engineer's estimate (All of London.)	4,960

London.—Cleaning, tarring, etc., of the ironwork to the jetty at Hornchurch Wharf, for the City Corporation:—

Baker, Hammond & Laver, Ltd.	£327	10	
F. J. Howard	316	0	
W. H. Wagstaff & Sons	315	0	
W. G. Beaumont & Son	299	10	
Vigor & Co. (Poplar), Ltd.	276	0	
*W. R. Hargrave & Sons	155	1	

London.—Internal decorations and repairs required at 471, Old Kent-road, for the City Corporation:—

W. H. Wagstaff & Sons	£172	0	
F. J. Howard	146	0	
*W. Garner & Co., Ltd.	121	15	

London.—New store at Stoke Newington. Messrs. H. Seymour Couchman & Sons, architects, 520, High-road, Tottenham:—

J. & J. Dean, Leyton	£938
A. J. Cripps, Putney	902
A. E. Symes, Ltd., Stratford	837
J. & R. Thompson, Acton	827
*J. Cannon & Sons, Stoke Newington	750

Macclesfield.—Reflooring Council houses at Poynton, for the R.D.C. Mr. J. H. Walters, surveyor, Moody-chambers, Moody-street, Congleton:—
*H. Goodall, Poynton £298

Maltby.—108 houses, for the U.D.C. Mr. Morgan R. Jones, engineer and surveyor:—

42 houses—
*W. H. Gilbert, Doncaster £10,736

28 houses—
*Mollekin Brothers, Maltby 9,750

28 houses—
*H. Booth & Sons, Ltd., Sheffield 7,504
(In lieu of tender previously accepted.)

Manchester.—Conversion of booking and entrance hall into two lock-up shops at Fallowfield Railway Station, Wilmslow-road and Ladybarn-lane, Fallowfield, for the L.N.E.R.:—
*Harris & Sheldon, Ltd., Manchester.

Mansfield.—Boys', girls' and junior mixed school and caretaker's house on the Ravensdale housing estate, for the T.C. Mr. Waude Thompson, architect:—
†Greenwood's (Mansfield), Ltd., Mansfield £15,210

Matlock.—Alterations to club premises at Dale-road, for the Building Committee of the Matlock Liberal Club. Mr. H. N. Farnsworth, architect. Messrs. J. Wildgoose & Sons, Ltd., Industrial Works:—
*J. Wildgoose & Sons, Ltd., Matlock.

Middleton.—Conveniences in Mason-street, for the T.C. Mr. J. Pollard, A.R.I.B.A., Borough Architect:—
*H. Ogden & Co., Middleton.

Milnrow.—Alterations at the "Commercial Inn," for the Crown Brewery Co., Ltd., Rochdale-road Brewery, Bury. Mr. Tom Barnes, architect, "Ainsdale." Ainsworth-road, Bury:—
*J. Fielding, Milnrow, near Rochdale.

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Mitford and Launditch.—Four Council houses at Beeston, for the R.D.C.:—
*Freeman Burton, Little Franston ... £1,132

Motherwell.—Electric installation in Hamilton-street advanced division school, for the Lanarkshire C.C.:—
*J. Meichan & Sons, 328, Abercrombie-street, Bridgeton, Glasgow £831 11 10

New Prestwick.—Houses in Ayr-road:—
Excavation, brick and mason — *W. & D. Lindsay, St. Quinox-road, Prestwick.
Plaster—*T. Thursby, Green-street-lane, Ayr.
Plumber—*Wilkie & Co., Willington-square, Ayr.
Joinery, carpentry and ironmongery — *D. Lindsay, St. Quinox-road, Prestwick.

Newcastle-on-Tyne.—Workshops at Benwell, for the School for the Blind. Mr. J. W. Thompson, architect, Old Benwell:—
*J. Jackson & Sons, Corporation-street, Newcastle.

Newcastle-on-Tyne.—Eight houses in Castleside-road. Mr. F. M. Dryden, architect, Market-street:—
*Longstaff & Son, Whickham.

Newcastle-on-Tyne.—Houses at Forest Hall. Mr. J. H. Fatkin, architect, 77, Westgate-road:—
*Mather & Thompson, Forest Hall.

Newmarket.—Houses, for the R.D.C. Mr. A. E. Austin, Housing Architect and Surveyor:—

Ashley, 8 houses—
*H. J. Kidd, Gazeley, near Newmarket £2,072 0 0

Bottisham, 6 houses (and well)—
*W. R. Southgate, Newmarket ... 1,691 17 0

Lode, 6 houses (and well)—
*Lane & Manning, Cherryhinton, Cambs. 1,724 10 0

Snailwell, 2 houses (and well)—
*H. J. Kidd, Gazeley, near Newmarket 581 5 0

Soham, 10 houses (and water main)—
*H. F. Wykes & Son, Ely 2,806 10 4

Swaffham Prior, 6 houses (and well)—
*S. S. Ambrose & Son, Ely 1,735 5 6

Wicken, 4 houses—
*Boon & Co., Fordham, Cambs. 1,140 0 0

North Shields.—Rebuilding of the "Colonel Linskill" hotel. Messrs. Joseph Oswald & Sons, architects, 2, Worswick-street, Newcastle:—
*W Jackson, 5, Audley-road, Gosforth, Newcastle.

Pickering.—32 houses, for the U.D.C. Mr. Henry Smith, architect, 36, Burgate:—
*G. T. Potts, Redcar £9,440

Sewer—
*T. E. F. Whitear, Norton-on-Tees ... 187

Prestwick.—Houses in New-Dykes-road and Shaw-road, for the Corporation. Mr. F. Pretty, Architect. Municipal Offices:—

Excavation, brick and mason—
*W. Paton & Sons, Ltd., 15, Kyle-street, Ayr £2,096
Joinery, carpentry and ironmongery—
*Findlay & Sons, Mauchline 1,284
Steel casement windows—
*Crittall & Co., Ltd., Royal Exchange-place, Glasgow 711
Painter—
*Kerr Bros., 34, Main-street, Newmills 164
Plumber—
*Porter & Sons (Glasgow), Ltd., 157, St. James-road, Glasgow 718
Plaster—
*Duncan Scobie, Main-street, Irvine ... 677
Slater—
*A. Ballantyne, River-street, Ayr 451

Shenfield.—New station buildings on the widened lines at Shenfield and Harold Wood, for the L.N.E.R.:—
*G. Lengden & Son, Ltd., Parkwood-road Works, Neepsend, Sheffield.

Shenley.—Erection of section "B" of the Middlesex colony, Porters Park, Shenley, for Middlesex C.C. Mr. W. T. Curtis, F.R.I.B.A., County Architect, 10, Great George-street, Westminster, S.W.1:—

George Taylor, Ealing	£65,432
Newby Bros., Ltd., Southgate	63,918
Henry Knight & Son, Ltd., N.17	63,528
G. Godson & Sons, Ltd., W.10	60,233
L. & W. Whitehead, Ltd., S.W.9	58,863
W. S. Try, Uxbridge	57,698
Albert Monk, Edmonton	56,900
C. Miskin & Sons, Ltd., St. Albans	54,969
Y. J. Lovell & Sons, Gerrard's Cross	54,463
‡John Laing & Son, Ltd., Mill Hill	53,751

Sowerby.—14 bungalows at Beechwood housing site, for the U.D.C. Mr. J. Eastwood, surveyor:—

Masons—*W. Parker, Sowerby Bridge.
Joiner—*W. H. Leah & Son, Halifax.
Slater—*H. Castle & Son, Ltd., Brighouse.
Painter—*Sowerby Bridge Industrial Society, Ltd.
Plumber—*J. Holdsworth, Halifax.
Electrician—*J. Pilling & Co., Halifax.
(Estimated cost, £3,206.)

Stalybridge.—Installation of electric light at "Eastwood," Cheetham-park, for the T.C. Mr. W. A. Mitchell, Borough Surveyor:—

*E. Taylor, Stalybridge.

Stirling.—Houses on Dolin Head housing site, for the Corporation. Mr. A. Gowdie, Burgh Architect:—

Excavation, brick and mason—*Keynolds & Son, 15, Clifford-street, Stirling.
Slater—*J. Robertson & Sons, 15, Campbell-street, Dunfermline.
Joinery, carpentry and ironmongery — *A. Christie & Sons, Cabinet Works, Stirling.
Glazing—*G. G. Kirk, Ltd., 71, Port-street, Stirling.
Plumber—*W. Milne, 48, Port-street, Stirling.
Cement and roughcasting—*J. Robertson & Son, Campbell-street, Dunfermline.

Stirlingshire.—Pavilion for Laurieston Bowling Club:—

Excavation, brick and mason—*R. Ramsey & Sons, Public Works' Contractors, Laurieston.
Plumber—*Roderick, Sinclair, 40, Mary-street, Laurieston, Falkirk.
Joinery, carpentry and ironmongery — *J. Lindsay, Carpentry Works, Falkirk.
Slate work and plastering—*D. Crewe, Falkirk Cement Works, Stirlingshire.

Stratford-on-Avon.—16 houses at Wellesbourne and four houses at Long Marston, for the R.D.C.:—

*J. Aston & Son.

Sunderland.—Alterations to Bishopwearmouth Parish Hall. Messrs. W. & T. R. Milburn, architects, 17, Fawcett-street:—

*D. & J. Ranken, Stockton-road, Sunderland.

Swanage.—Construction of groynes, for the U.D.C.:—

*Bolton & Lakin, Birmingham £2,340
(In lieu of tender withdrawn.)

Swansea.—Conversion of offices and drainage at Cwm Council school, for the E.C. Borough Architect:—

*Hector Rosser, Llansamlet £320

Swinton and Pendlebury.—Proposed Moorside primary Council school providing accommodation for junior mixed 320 and infants 280, caretaker's bungalow, senior boys 360, senior girls 360, for the U.D.C. Messrs. W. Chasen Ralph & Sons, architects, Leaders-buildings, King-street, Wigan:—

‡J. Gerrard & Sons, Ltd., Manchester.

Taunton.—80 houses of the three-bedroom type and eight houses of the four-bedroom type, on the Lambrook housing site, for the T.C.:—

*King & Co., Newport—
20 three-bedroom type £5,960
20 ,, ,, ... 5,960
*J Standerwick & Sons, Bridgwater—
20 three-bedroom type 5,880
20 ,, ,, ... 5,840
8 four-bedroom type 2,640

Thornley Colliery.—Alterations to the R.C. school. Mr. R. Burke, architect, 12, Grey-street, Newcastle-on-Tyne:—

*E. Thompson, Dinnington Village.

Thurles.—38 houses at the Derheen, for the U.D.C.:—

John Lyons, Thurles	£10,832 0
Duggan Bros., Templemore	8,654 0
Dwyer & Fogarty, Thurles	8,056 0
Ryan Bros., Thurles	7,942 0
*W. Leahy, Thurles	7,706 4

Tottenham.—Extension to factory at Tottenham. Messrs. H. Seymour Couchman & Sons, architects, 520, High Road, Tottenham:—

Carter Bros., Tottenham	£1,165
J. & J. Dean, Leyton	1,125
A. E. Symes, Ltd., Stratford	1,044
*J. & R. Thompson, Acton	997

Troon.—Reconstruction and extensions at Portland-street for new shops, tearooms, etc., for the Co-operative Society, Ltd. Mr. J. B. McInnes, architect, 13, Ayr-street:—

Digging and building—*Wilson & Adams, 3, Burnside-street.
Plumber—*D. Walker & Sons, 25, Portland-street.
Joinery and ironmongery—*A. Hunter, Temple Hill.

(All of Troon.)

Warwick.—External decorations of Council houses at Lawrence-avenue and Cape sites, for the City Council:—

*A. C. Taylor, Warwick £453

Washington.—Revised estimate of £5,542 for 22 houses on the Heworth-road estate, for the U.D.C. Mr. R. J. Swaddle, surveyor:—

*Direct Labour £5,542

West Bromwich.—Erection of James Edward school at Friar-park, for the E.C. Mr. A. O. Chatterley, architect, Newhall-chambers, Newhall-street, Birmingham:—

*P. W. Cox, Ltd., Birmingham.

West Lancashire.—For (*a*) 8 houses at Lydiate and (*b*) 10 houses at Ridge-lane, Netherton, for the R.D.C. Mr. R. Rosbotham, surveyor, Derby-street, Ormskirk:—

(*a*) *D. Cooper, Warrington.
(*b*) *G. & J. Seddon, Ltd., Bolton.

Willenhall.—Further 34 houses on the Clothier-street site, for the Council:—

*J. Hickin & Sons £9,031

Worcester.—Additions and alterations to Cherry Orchard Council school, for the C.C. Mr. W. Ransom, City Engineer:—

*E. L. Lewis, Redditch £7,476

Wrexham.—For (*a*) 20 houses at Rossett, (*b*) 20 at Cefn, (*c*) 14 at Broughton, for the R.D.C. Mr. D. E. Edwards, Acting Engineer, Imperial-buildings:—

(*a*)*W. Gittins	£6,050
(*b*)*H. Hughes	6,460
(*c*)*E. W. Gittins & Sons	4,774

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